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GENERAL STUDIES (TEST CODE : 1049)

Name of Candidate	Apurv Chauhan		
Medium Eng./Hindi	English	Registration Number	13129
Center	02	Date	21 July 2018

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are TWENTY questions printed in ENGLISH & HINDI
   इसमें बीस प्रश्न हैं अंग्रजी और हिन्दी में छपे हैं।
3. All questions are compulsory.
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका म खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

M-1/4, Plot No-A-12/13, 1st Floor, Ansal Building, Dr. Vidya Sagar Homoeopathic Clinic, Mukherjee Nagar, Delhi-110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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1. Concerns regarding the wide formulation and indiscreet application of discretionary powers of the Governor need closer attention. Discuss. (150 words) 10

राज्यपाल की विवेकाधीन शक्तियों के व्यापक निरूपण एवं अविवेकपूर्ण अनुप्रयोग संबंधी चिन्ताओं के संदर्भ में सावधानीपूर्वक ध्यान केन्द्रित करने की आवश्यकता है। चर्चा कीजिए।

The form of parliamentary democracy in India requires the Governor to act on the aid and advice of council of ministers of the State.

However, in practise and in theory there exists a zone of discretionary exercise of power in the following domains.

S.No.	Discretionary Power	Concerns over its inappropriate use
1	Invitation to form government in case of hung assemblies / single largest party refusing	Partiality in favour of party in Centre due to appointment and removal on the

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	refusing to form government	doctrine of pleasure of president
2	Reservation of contentious bills ~~in~~ for presidents consideration	Impinges on authority of state legislature
3	Report to President on imposition of emergency under Article 356 and other matters	Going beyond federal principles enshrined in SR Bommai judgement

Way Forward

According to Sarkaria Commission, Punchi Commission and Venkatchaliah Commission certain principles may be adopted –

1. Unbiased appointment from outside the state
2. Review of "pleasure of president"
3. Clear priority incase of hung assemblies

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2. Explain the concept of subordinate legislation in India. Also discuss the mechanisms for their scrutiny and control. (150 words) 10

भारत में अधीनस्थ विधान की अवधारणा की व्याख्या कीजिए। साथ ही उनकी संवीक्षा और नियंत्रण की क्रियाविधियों की भी चर्चा कीजिए।

Legislation in modern times has increasingly become a very vast, complex, interdisciplinary and technical exercise (such as Assisted Reproductive Technology Bill, etc).

In these circumstance, the legislative forms and gives broad principles a while minute rules are left to the executive authority, provided they are in consonance with the principal act.

Eg- Excise Rules 2001 for implementing Customs Act 1961.

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Mechanisms for ~~Strict~~ Scrutiny and Control

1. Parliamentary Committee on Subordinate Legislation which studies rules laid in conformity with an act

2. Parliamentary control via devices such as starred/unstarred questions, zero hours, question hour

3. Parliamentary standing committees on various domains and ministries

4. Civil Society activism and accountability

5. Judicial review incase of rules not being in accordance with act or violature of Constitutional rights.

An active parliament, judiciary and civil society

is neccessary to ensure fair and just subordinate legislative.

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3. The crucial position accorded to the Speaker in Indian legislatures, makes it imperative to protect them from undue political pressures and incentives. Examine. (150 words) 10

भारतीय विधायिकाओं में अध्यक्ष को प्रदान की गई महत्वपूर्ण प्रस्थिति वस्तुतः उन्हें अनुचित राजनीतिक दबावों एवं प्रोत्साहनों से सुरक्षित करना आवश्यक बनाती है। परीक्षण कीजिए।

The Speaker occupies a pivotal position in Constitutional machinery, as reflected in high order of Precedence at 7 along with Chief Justice of India.

Responsibilities requiring Political impartiality

S.No.	Responsibility	Potential for misuse if under political pressure
1	Quasi-judicial role in Anti-Defection (Schedule 10) disqualification cases	May create artificial majorities by biased his ruling in disqualification cases.
2	Maintain decorum	May expell members on frivolous grounds

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		~~eve~~ Crushing legitimate and fair opposition
3	Admitting motions involving condemnation, no confidence, agenda, point of order, ~~etc~~	May push through governmental position without adequate debate
4	Certify money Bills	May bypass Rajya Sabha
5	Appointment to various Committees	Subject to favouritism in case of political bias

Way Forward

1. Adopt British tradition of mandatory relinquishment of party post upon being elected as speaker
2. Judicial review in cases of malafide intention according to Kihoto Hollohan judgement
3. Appointing leaders with authority and impartiality ~~in~~ as Speaker.

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4. The Departmentally-Related Standing Committees have been referred to as mini-parliaments in India. Highlight their relevance in a democratic polity and discuss, with examples, how they improve the overall effectiveness of the Parliament. (150 words) 10

विभागों से संबद्ध स्थायी समितियों (विभागीय स्थायी समितियों) को भारत में मिनी-संसदों के रूप में संदर्भित किया गया है। लोकतान्त्रिक राजनीति में उनकी प्रासंगिकता पर प्रकाश डालिए और साथ ही उदाहरण सहित चर्चा कीजिए कि वे संसद की समग्र प्रभावकारिता में किस प्रकार वृद्धि करती हैं।

~~Dep~~ There exists 24 Departmental Standing Committees (16 under Lok Sabha and 8 under Rajya Sabha) for aiding Parliament in achieving its primary objectives—

1) Drafting legislations
2) Keeping executive accountable

Role in Parliamentary Democracy

1. Assess overall functioning of ministry without going into day to day affairs

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2. Scrutinize important policy documents eg- ~~Women~~ National Policy on Women under Ministry of Women and Child Development

3. Assess readiness in meeting ministry objectives eg- Parliamentary Standing Committee on Defence reporting on inadequate armament in case of conventional war on the basis of CAG report.

4. Keep executive in check via summoning important executives eg- RBI Governor summoned by PSC on Finance after demonetization

5. Overall yearly assessment and examining of budgetary proposals.

Standing Committees ensure detailed and expert control of legislature over executive in Indian parliamentary democracy.

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5. Enumerate the issues associated with functioning of tribunals in India. How can these be addressed? (150 words) 10

भारत में अधिकरणों की कार्यपद्धति से संबद्ध मुद्दों को सूचीबद्ध कीजिए। इनका समाधान कैसे किया जा सकता है?

Tribunals are quasi-judicial bodies established to achieve specific domain objectives by providing them flexibility in rules of evidence and personnel skilled in the field.

For example - National Green Tribunal, CESTAT, Central Administrative Tribunal.

However, there have emerged certain issues which come in the way of the intended objectives.

S.No.	Issues	Remedies Suggested
1	Overlapping jurisdictions	1. Inter-tribunal agreements on jurisdiction 2. Mutual delegation

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	leading to conflict eg- CCI and TDSAT over telecom disputes involving entry of a new player in Indian market	of personnel
2	Conflict of interest due to executive members in judicial role. eg- IRS officers in ITAT	1. Balance of judicial and Executive members 2. Third party domain experts
3	Judicial over-reach by tribunal orders Eg: Certain NGT orders on vehicular pollution which were later repealed	1. Judicial restraint by serving members
4	Bypassing judicial branch	1. Adherence with Chandra Kumar case judgement.
5	Variance in terms of service conditions	1. Implementation of Finance Act 2018 vis a vis tribunals.

Tribunals play an important role in ensuring speedy, fair and objective judgements — thus ensuring justice

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6. Examine the significance of Gram Sabhas, as mentioned in Article 243A of the Indian constitution, in the development process with special reference to Fifth Schedule areas. (150 words) 10

पांचवीं अनुसूची के क्षेत्रों के विशेष संदर्भ में विकास की प्रक्रिया में, भारतीय संविधान के अनुच्छेद 243A में वर्णित ग्राम सभाओं के महत्व का परीक्षण कीजिए।

Gram Sabhas, consisting of all adult voting members in the village, embody the ultimate goal of Gandhian philosophy of Swaraj by Direct Democracy.

Significance of Gram Sabhas in the Developmental Process

1. Aiding implementation of important executive decisions. For example – claims of land ownership under Forests Right Act 2006 in 5th Schedule area are vetted by Gram Sabha.

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2. Social Audit of Flagship Schemes For eg- MNREGA
3. Ownership and control over land use Incases of acquisition, Common property resources such village ponds and wells, etc
4. Inculcating spirit of democracy at the grassroot level ensuring inclusion of Women, dalits, adivasis and minorities in decision making
5. Role in Planning processes via village Development Plans and prioritization of local objectives.

Gram Sabha's thus form the fundamental unit of the massive democracy that is India as enshrined in Article 243A under

73rd Constitutional Amendment Act 1992.

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7. The Rajya Sabha is merely a secondary house rather than a second house in the Indian Parliamentary system. Critically analyze the statement. Also, compare and contrast the position of the Rajya Sabha vis-à-vis the State legislative councils. (150 words) **10**

भारतीय संसदीय प्रणाली में राज्यसभा वस्तुतः दूसरा सदन होने के स्थान पर एक दूसरे दर्जे का सदन मात्र है। इस कथन का आलोचनात्मक विश्लेषण कीजिए। साथ ही, राज्य विधान परिषदों के मुकाबले राज्यसभा की स्थिति की तुलना कीजिए और अंतर बताइए।

Rajya Sabha, as the Council of States, plays a critical role in Indian Legislature and enjoys great power and prestige with the Lok Sabha.

Equality with Lok Sabha

1. Passing and origin of ordinary Bills
2. Constitutional Amendment Bills
3. Participation in parliamentary committees
4. Legislative control over governance functions via debates on policies

Special Powers vested in RS

1. Legislation on State subjects after motion passed by it

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2. Creation of All India Services

Thus, it enjoys great power and prestige on all matters as Lok Sabha except the following -

1. Passing of No-Confidence motion
2. Passing of money bills

These are neccassry so that smooth functioning of executive occurs in accordance with will of the people expressed in general elections.

Comparision with State Legislative Councils

1. Rajya Sabha can reject all bills except money bills and No confidence motion being equal with Lok Sabha. However, legislative councils are only dilatory, that is, if passed again by lower house the bill stands.
2. Legislative Councils have more representation by nomination than Rajya Sabha.

Rajya Sabha, thus, enjoys great position and ensure no hasty or ill considered bills are passed while representing interests of States.

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8. A major shift is needed in the institutional framework of the Central Water Commission (CWC) and the Central Ground Water Board (CGWB) to make water management more holistic and multidisciplinary. Discuss in the context of Mihir Shah Committee recommendations. (150 words) 10

जल प्रबंधन को अधिक समग्र और बहु-विषयक बनाने के लिए केंद्रीय जल आयोग (CWC) एवं केन्द्रीय भूमि जल बोर्ड (CGWB) के संस्थागत ढाँचे में महत्वपूर्ण परिवर्तन की आवश्यकता है। मिहिर शाह समिति की अनुशंसाओं के संदर्भ में चर्चा कीजिए।

Recent report released by NITI Ayog de shows that nearly 600 million Indians live in water stress and 2 lakh die annually due to unavailability of pure and sufficient quantities of water due to diseases.

Given, this scenario, Mihir Shah Committee recommendations must be considered at the earliest.

S.No.	Recommendations	Reason Given
1.	Merge CWC and CGWB	Water must be considered as

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	(HOLISTIC)	a hydrological unity
2	Ensure wider representation from domains other than engineering in CWC & CGWB (MULTIDISCIPLINARY)	Agro economists, Geologists, Hydrologists, etc are needed for modern day water management
3	Ensure proper utilization of Irrigation potential created by dam reservoirs (EFFICIENT)	Low utilization enhances the costs due to dam displacement, environmental loss, land use change, etc.

Thus, the 3 principles of holism, multidiseiplinary and efficient water management must be adopted for averting the crisis of water stress in India.

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9. On what grounds can a person be denied the right to contest elections to the Parliament in India? Will a life-time ban on those convicted of heinous crimes address the problem of criminalisation of politics? Discuss. (150 words) 10

किसी व्यक्ति को भारत में संसद हेतु चुनाव लड़ने के अधिकार से किन आधारों पर वंचित किया जा सकता है? क्या जघन्य अपराधों के दोषी व्यक्तियों पर जीवनपर्यन्त प्रतिबंध से राजनीति के अपराधीकरण की समस्या का यथोचित समाधान होगा? चर्चा कीजिए।

The right to contest elections for Indian Parliament granted by the Constitution is regulated by legislative provisions enacted by the Parliament under Representation of People Act!

Qualifications	1. Must be a citizen of India ~~and 25~~ 2. Must not be an undischarged insolvent 3. Must be of sound mind 4. Must not be under allegiance to foreign nation.
Disqualifications	1. Convicted of heinous crime with imprisonment over 2 years 2. Acquitted of certain crimes such as sati, dowry, untouchability

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Disqualifications

3. Dismissed from service on account of corruption
4. Possesses interest in government contact/s and offices of profit
5. Convicted of certain electoral offences and misconduct.

Debate on Life-Time ban for Convicted Criminals

Arguments in favour

1. Ensure re-entry after 6 years of imprisonment is prevented
2. Strong deterrent
3. Prevent people of questionable morality and criminals
4. Promote entry of spotless and honest youth.

Arguments against

1. False politically motivated conviction by adversaries might increase
2. Control by proxy by such candidates using party positions
3. Prevents opportunity for reform

Given the contentious nature of the issue, a wide debate involving political parties and civil society is needed on the issue.

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10. Directive Principles can be considered as even more important than the Fundamental Rights because they provide a positive thrust towards welfare. Discuss. (150 words) **10**

निर्देशक तत्वों को मूल अधिकारों से भी अधिक महत्वपूर्ण माना जा सकता है क्योंकि वे कल्याण की दिशा में एक सकारात्मक प्रेरणा प्रदान करते हैं। चर्चा कीजिए।

According to the honourable Supreme Court in Minerva Mills case(1981) the balance between Fundamental Rights and Directive Principles of State Policy is an ~~essential~~ basic feature of Indian Constitution espoused in Kesavanda Bharati Case(1973).

S.No.	Domain	Fundamental Right	DPSP
1	Objective	Political democracy	Social-Economic democracy
2	Nature	Judicially enforceable	Not judicially enforceable

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2			but carry persuasive value and political weight
3	Scope	Part III 1. Right to Equality (14-18) 2. Right to Freedoms (19-22) 3. Right against (23-24) Exploitation 4. Religious Rights (24-28) 5. Minority Rights (29-30) 6. Constitutional Remedy (32)	Part IV 1. Socialist 2. Gandhian 3. Libertarian (wide ranging in scope)
4.	Sources	American Constitution	Instruments of Instruction GoI Act 1935

Thus, it may be concluded that one may not prosper without the other and both ultimately are oriented towards achieving India as enshrined in the Preamble to the Constitution.

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11. In light of demands for replacement of the FPTP (First Past the Post) system with other alternatives, compare the merits and enumerate the challenges associated with replacing the current system. (250 words) **15**

FPTP (फर्स्ट पास्ट द पोस्ट) प्रणाली को अन्य विकल्पों से प्रतिस्थापित किए जाने की मांगों के प्रकाश में, वर्तमान प्रणाली के लाभों से तुलना करते हुए इसे प्रतिस्थापित करने से सम्बंधित चुनौतियों को सूचीबद्ध कीजिए।

The nascent Indian democracy adopted the First Past the Post System after Independence after great debate in the Constituent Assembly.

Definition of FPTP :- A single member constituency where the candidate achieving ~~single~~ largest number of valid votes casts is selected.

Merits of FPTP System

1. Simple and easy to understand for voters

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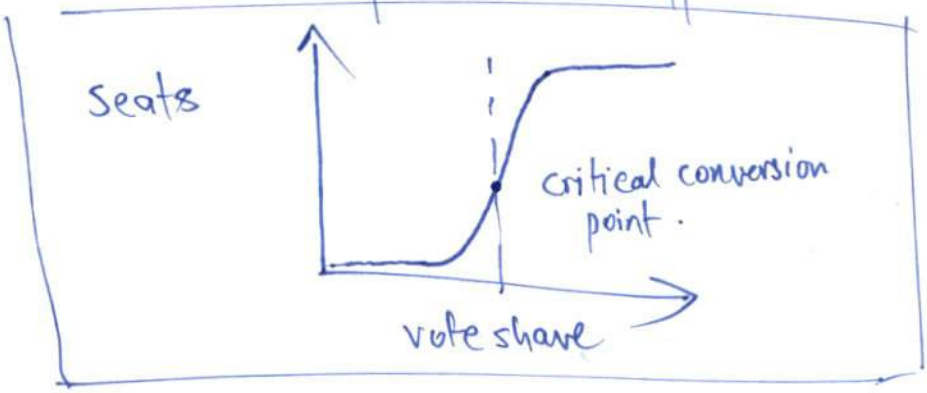
2. Greater connect between MP/MLA and her constituency
3. Relatively lesser dominance of party command structure
4. Tendency to produce stable governments due to seat-vote share ~~eq~~ relational effect.



However, it has several demerits because of which alternatives are being considered.

Proportional Representation system → Party Lists
→ Single Transferable Vote

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In this, the seats allocated are proportional to vote share.

Merits of PR vis-a-vis FPTP

1. More representative of minorities and marginalized groups which may fail to ~~reach~~ reach critical seat conversion vote share
2. STV has a tendency to weed out polarizing candidates using hate speech or regional caste satraps. It favours moderate inclusive candidates.

Way forward

Several modern consitutions written in 21st century such as Srilanka and Nepal have adopted a mixed FPTP-PR system. It may be considered by India after due debate.

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12. Despite long term recognition of the problem of pendency of cases in the courts, limited progress has been made in reducing their number. What are the possible reasons for such a scenario? Suggest a framework of measures that can be taken to address this issue. (250 words) 15

न्यायालय में वादों के लंबित रहने की समस्या की बहुत समय से पहचान होने के बाद भी इनकी संख्या को कम करने की दिशा में सीमित प्रगति ही हो पाई है। ऐसे परिदृश्य के लिए संभावित कारण क्या हैं? इस समस्या को हल करने के लिए विभिन्न उपायों की एक रूपरेखा का सुझाव दीजिए।

The maxim of justice delayed is justice denied holds true in Indian scenario.

S.No.	Level of Judiciary	Number of Pending Cases
1	Lower Courts	~3 crore
2	High Courts	>40 lakh
3	Supreme Court	>50 thousand

Thus, case delays of over ten years, frequent adjournment, lapse due to death of witnesses, etc are commonly observed.

S.No.	Reason	Suggested measure
1	Inadequate infrastructure	1. Greater budgetary allocation for court

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		complexes
2	High vacancy and low quality of judicial pronouncements leading to appeals	1. Consider National Judicial Services on all India lines 2. Fast track collegium debates with transparency and publishing minutes of the meeting with due redactions
3	Low technological penetration	1. Implement e-Judiciary in Mission Mode under NeGP 2. National Judicial Data Grid 3. E-Courts 4. In camera proceedings
4	Frequent adjournments and Indiscipline by lawyers	1. Greater regulation by Bar Council of India

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5	Vague laws open to interpretation and consequent litigation	1. Greater legal representation in Parliamentary drafting
6	Low penetration of Alternate Dispute Resolute	1. Promote Lok Adalats, 2. Nyaya Panchayats 3. Arbitration and Conciliation Act 2015 Implementation 4. Capacity building institutions
7	Poor quality of policing and prisons leading to delays	1. Implement police reforms (Parkash Singh 2006 Directives) 2.
8	Compulsive litigation by government and large corporates	National Litigation Policy for responsible litigation
9	Judicial over-reach	Judicial restraint,

Several recommendations on legal codes consolidation, adversarial system transition, etc recommended by Malimath Committee is a

good starting point for addressing judicial delays

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13. Despite the phrase 'due process of law' not being included in Article 21, the Supreme Court, over the years, has adopted the doctrines of 'procedural due process' and 'substantive due process' into Indian constitutional law. Comment. (250 words) **15**

'विधि की सम्यक् प्रक्रिया' वाक्यांश के अनुच्छेद 21 में सम्मिलित नहीं होने के बावजूद, समय के साथ सर्वोच्च न्यायालय ने 'प्रक्रियात्मक विधि के अनुसार' एवं 'सारवान विधि के अनुसार सम्यक् प्रक्रिया' के सिद्धांतों को भारतीय संवैधानिक कानून में अपना लिया है। टिप्पणी कीजिए।

Originally, the Constituent Assembly adopted due process of law under Article 21 borrowed from Japanese Constitution.

The term meant that the scope of judicial review for violating fundamental right shall be restricted to improper procedure followed or breach of jurisdiction in legislation.

The substantive content of the act

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was not subject to judicial review.

However, in Maneka Case the supreme court widened the scope of the term to include reasonableness in substantive terms as integral to a just and fair democracy.

Thus, Article 21, containing Right to Life and Liberty, became a hallmark of Indian jurisprudence owing to its wide applicability and ensuing scope. Several judgements have included various components as essential to living a human life

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with dignity, such as –

1) Right to speedy trial
2) Right to health
3) Right to education
4) Right to travel abroad
5) Right to privacy , etc.

Thus, while greatly expanding the scope of constitutional protection, its has also invited charges of judicial interference by PILs, suo motu cases, judicial legislation, etc.

While exercising due judical restraint, the commendable efforts of Indian judiciary to ensure fairness via expanding Article 21 is worthy of appreciation

for the goal of Indian democracy.

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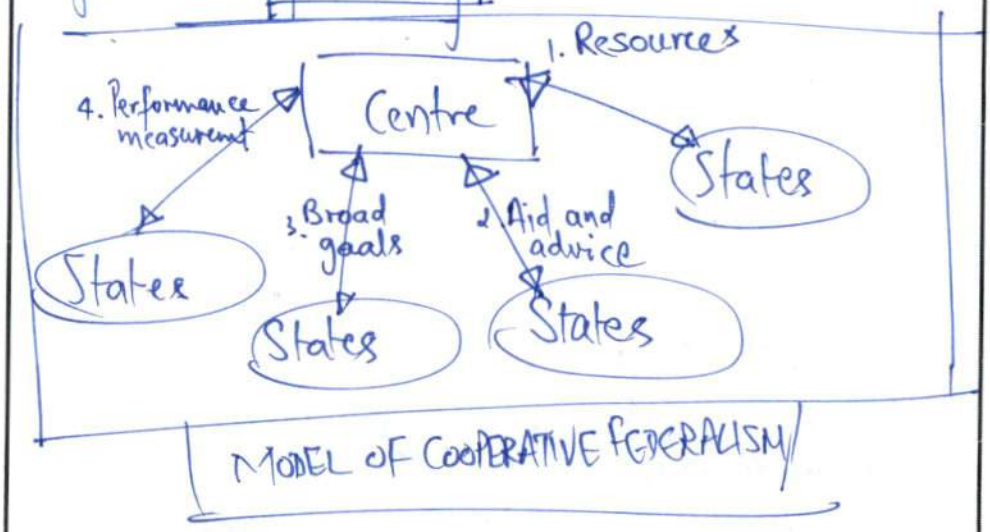
14. Can we say that cooperative federalism in India has strengthened in the post-liberalisation era? Give reasons in support of your answer. (250 words) **15**

क्या हम कह सकते हैं कि उदारीकरण के बाद की अवधि में भारत में सहकारी संघवाद सुदृढ़ हुआ है? अपने उत्तर के समर्थन में कारण प्रस्तुत कीजिए।

Cooperative Federalism can be defined as a system of polity where states and centre coordinate together to achieve national goals within state specific contexts providing for due flexibility.



MODEL OF COOPERATIVE FEDERALISM

Post Liberalization, Privatization, Globalization

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reforms of 1991, several improvements have been observed in this 2 way sharing.

Achievements post 1991 in Cooperative Federalism

1. Replacement of Planning Commission with NITI Ayog as a think tank repository
2. 14th Finance Commission report for greater vertical devolution of divisible pool of resources from 32% to 42%.
3. Publication of various Indices to help states achieve broad goals eg- Health Index, School Education quality Index, Business Reform Index.

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Concerns and limitations

1. States with weak institutional and infrastructural systems have lost out for eg- North eastern states attracting very low FDI which goes mostly to Maharashtra, Gujarat, Tamil Nadu and Karnataka leading to inequality
2. Actual share of devolved resources has not increased much. It is of untied nature now
3. Further cooperative federalism at the third tier of governance - panchayats and municipalities has been lacking
4. Inter State Council meetings infrequent.

The spirit of Team India is necessary to achieve the national objectives in a comprehensive way and must be inculcated.

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15. Faulty regulatory policies can have a severe adverse effect on the efficient interplay of market forces and end up harming public interest. Examine in the context of systemic issues pertaining to regulatory environment in India. (250 words) **15**

दोषपूर्ण विनियामक नीतियों का बाजार की शक्तियों की कुशल अंतर्क्रिया पर गंभीर विपरीत प्रभाव पड़ सकता है और सार्वजनिक हित को नुकसान पहुँच सकता है। भारत में विनियामकीय परिवेश से संबंधित प्रणालीगत मुद्दों के संदर्भ में परीक्षण कीजिए।

The fundamental objectives of regulation in a market ~~as~~ are as follows –

1. Prevent harmful externalities
2. Prevent market failure situations
3. Prevent information asymmetry
4. Prevent monopolistic abuse
5. Provide flexibility for nascent market with potential for growth.

However, it has been observed that in certain instances, inorder to achieve these objectives, more harm is done to public interests than good.

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For example - price control in pharmaceutical industry lead to the sole manufacturer of a drug for children to withdraw from market in 2018.

Similarly, Indian automobile manufacturers association complained of unstable regulatory changes preventing growth of the sector. (SIAM Report)

S.No.	Systemic Issues	Suggestions
1.	Blanket bans rather than control and monitoring Eg- RBI order on cryptocurrency via banking channels	Minimum regulation to ensure neccessary objectives rather than blanket bans
2.	Regulatory turf wars eg- CCI and	Inter deputation of personnel

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	TRAI	2. Clear jurisdiction
3	Low capacity building and personnel	Depute lateral talent where absence
4	Absence of accountability of Regulator to any authority. eg- RBI's role in ~~the~~ ~~M~~ PNB bank fraud case	Parliamentary oversight
5	Overdependance on funds and functionaries eg - erstwhile FMC in NSEL spot exchange scam	Autonomy in Personnel and Finances
6	Over-regulation leading to market failures	Give due scope for private profit.

A balance between various objectives and being driven by a sector based policy for regulation may be the way forward for regulatory reform in India.

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16. Mention the constitutional provisions to safeguard and ensure the independent and impartial functioning of the UPSC. Further, assess the limitations of UPSC in effectively performing its role as the 'watchdog of merit system' in India as envisioned by the Constitution. (250 words) **15**

UPSC की स्वतंत्र और निष्पक्ष कार्य पद्धति को सुरक्षित रखने और सुनिश्चित करने हेतु संवैधानिक प्रावधानों का उल्लेख कीजिए। साथ ही संविधान द्वारा प्रकल्पित 'योग्यता प्रणाली के संरक्षक' के रूप में अपनी भूमिका को प्रभावी रूप से निष्पादित करने में UPSC की सीमाओं का आकलन कीजिए।

The Union Public Service Commission plays the central role in recruitment and service matters of public servants in India.

Constitutional Provisions for Impartiality

1. Fixed tenure system
2. Removal only on grounds mentioned in constitution such as insolvency, paid employment outside office or proved misbehaviour after court

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enquiry

3. Absence of inducements as member cannot accept any other post after retirement

4. Expenditure charged upon Consolidate Fund of India.

5. Terms of service cannot be varied to their disadvantage

Limitations in Performing Duty

1. Lack of bipartisan and civil society representation in appointment may lead to charges of political bias

2. Conflicting role in corruption matters with CVC

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3. Political pressure may lead to changes in policy decisions such as eligibility criteria, syllabus, etc

4. Delay in implementing decisions of several committees for reform in examination systems eg- Hota Committee, etc.

Thus, these challenges must be overcome to enable UPSC to perform its stellar role as the watchdog of the merit system in India.

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17. What are the key issues in the context of electoral funding in India? How far do you think the idea of state funding of elections can address these issues? (250 words) **15**

भारत में चुनावी वित्तपोषण के संदर्भ में मुख्य मुद्दे क्या हैं? आपकी राय में चुनावों के राज्य द्वारा वित्तपोषण का विचार इन मुद्दों का किस सीमा तक समाधान कर सकता है?

The unhealthy influence of finance in elections is a major concern for Indian democracy.

S.No.	Key Issues in Electoral funding
1	Lack of transparency in sources of funding
2	Expenditure limits inapplicable to parties (only candidates are subject to it)

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3	Ticket distribution and winning candidates do not reflect the average voter and thereby their financial interests
4	Use of cash and liquors for voter bribing in a clandestine manner despite Election observers
5	Financial-criminal nexus interplay in inner party decisions
6	Indirect funding of improper strategies such as paid news

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State Funding of Elections

Various committees such as Indrajeet Gupta Committee have considered the proposal. While it may correct these issues to certain extent the following must be overcome before it is implemented –

1. Inner party democracy
2. Curb of cash, liquor and other clandestine uses
3. Appropriate threshold for compensation of candidates receiving votes
4. Resolve debate over cash/kind/both as means of financial support.

Fairness in election finance is a sine qua non for electoral democracy in India.

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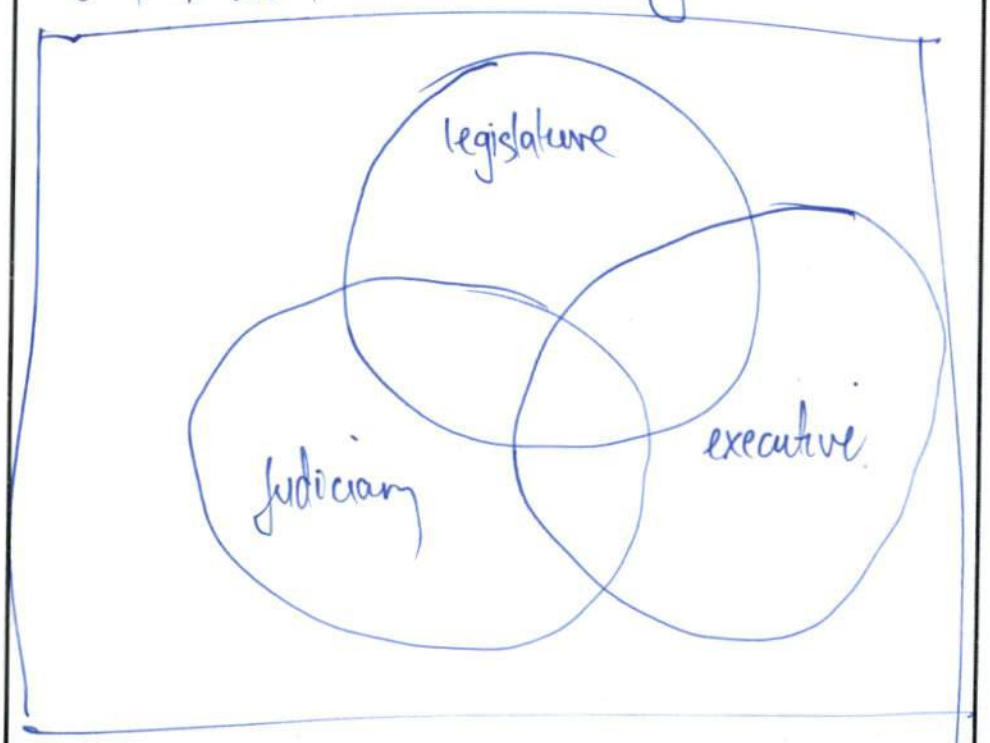
18. Separation of powers in case of India has acquired its own uniqueness under the constitutional arrangement. Explain. (250 words) **15**

भारत के सन्दर्भ में शक्तियों के पृथक्करण ने संवैधानिक व्यवस्था के अंतर्गत एक अनन्य विशिष्टता प्राप्त कर ली है। व्याख्या कीजिए।

The doctrine of separation of powers, as envisioned by Montesquieu, has several overlapping features in the practice of Indian constitutional democracy.



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Various examples

Executive Role in legislation

Delegated legislation via various rules

Judicial review of legislation

Acts such as SC/ST Prevention of Atrocities Act, Vishakha Judgement on sexual harassment of women at workplace

Executive Role in Judicial Function

CESTAT involving customs officers in judicial roles

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Thus, the actual practice has had several overlap.

This has also led to conflicts between the 3 organs.

Effective Cooperation, consultation and restraint are the watchwords to ensure smooth functioning.

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19. Highlight the extent of President's powers under Article 352. Comment on the judicial scrutiny of proclamation and the exercise of executive powers under National Emergency. How is this power different from the one bestowed under Article 356? (250 words) **15**

अनुच्छेद 352 के अंतर्गत राष्ट्रपति की शक्तियों की सीमा पर प्रकाश डालिए। राष्ट्रीय आपात की उद्घोषणा की न्यायिक संवीक्षा तथा आपातकाल के दौरान कार्यकारी शक्तियों के प्रयोग पर टिप्पणी कीजिए। यह शक्ति अनुच्छेद 356 के अंतर्गत प्रदत्त शक्ति से किस प्रकार भिन्न है?

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20. Fiscal transfers from the Centre to States are critical in India. In this context, explain the rationale of both general and specific purpose fiscal transfers. Also highlight the problems witnessed in the design and implementation of specific purpose transfers. (250 words) **15**

भारत में केंद्र से राज्यों को राजकोषीय अंतरण अत्यंत महत्त्वपूर्ण हैं। इस संदर्भ में, सामान्य और विशिष्ट प्रयोजन वाले राजकोषीय अंतरण के औचित्य की व्याख्या कीजिए। साथ ही, विशिष्ट प्रयोजन वाले अंतरण की अभिकल्पना और कार्यान्वयन में आने वाली समस्याओं प्रकाश डालिए।

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GENERAL STUDIES (TEST CODE : 1062)

Name of Candidate	Apurv Chauhan		
Medium Eng./Hindi	English	Registration Number	13129
Center	02	Date	13 June 2018

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
13	15	
14	15	
15	15	
16	15	
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18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are TWENTY questions printed in ENGLISH & HINDI
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. All questions are compulsory.
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

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1. Technical solutions are necessary to augment the traditional methods of guarding the border. In this context, while mentioning the different components of Comprehensive Integrated Border Management System (CIBMS), discuss how it can help to address the gaps in the present system of border security. **(150 words) 10**

सीमा चौकसी की पारंपरिक विधियों का संवर्द्धन करने हेतु तकनीकी समाधान आवश्यक हैं। इस संदर्भ में, व्यापक एकीकृत सीमा प्रबंधन प्रणाली (कॉम्प्रिहेंसिव इंटीग्रेटेड बॉर्डर मैनेजमेंट सिस्टम: CIBMS) के विभिन्न घटकों का उल्लेख करते हुए, चर्चा कीजिए कि सीमा सुरक्षा की वर्तमान व्यवस्था में विद्यमान कमियों को दूर करने में यह कैसे सहायता कर सकता है।

Border management is one of the core components of ensuring national security of a nation.

In order to achieve this, CIBMS formulated on the principles of Madhukar Gupta committee has been proposed for securing Indo-Pak border.

Components

A) Traditional Components

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1) Border fencing
2) Flood lighting
3) Patrolling with check posts

(B) Technical Components

1) Infre-Red cameras
2) Night vision
3) Underground sensors
4) Laser walls

Improvement over current system

1) Integrated grid system to ensure complete picture from various sources
2) Overcomes difficulties in guarding varied terrain such as rivers which cant be fenced traditionally (e.g. using laser walls)
3) Efficient system with ~~check~~ failsafe system via multiple approaches.

Border management will ensure prevention of terrorism, narco-smuggling and illegal migration.

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2. To deal with myriad challenges of 'Behavioural Microtargeting' and 'Psychographic Messaging', analyse the need for having a robust data protection framework in India. **(150 words) 10**

'बिहेवियरल माइक्रोटार्गेटिंग' तथा 'साइकोग्रैफिक मेसेजिंग' ('व्यवहारात्मक सूक्ष्म-लक्ष्यीकरण' और 'मनोवृत्तिपरक संदेशन') की असंख्य चुनौतियों से निपटने के लिए, भारत में एक सुदृढ़ डेटा संरक्षण ढांचे की आवश्यकता का विश्लेषण कीजिए।

Cambridge Analytica - Facebook Controversy demonstrates how data obtained via unethical means may be used for harmful purposes such as -

① Identification of swing voters for focussed campaigning

② specially tailored messages for ~~consume~~ target audiences

③ These are not limited to political campaigns but also to business marketing, fund raising, ~~unsolicited~~ etc.

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Therefore a robust data protection framework is needed as in its absence it may lead to –

1. Unfair elections undermining democracy
2. Loss of citizen's privacy
3. Creation of "echo-chambers" in society of varied ideological leanings
4. Reduction in market competiveness (as richer firms may access these which may be unavailable to smaller firms)
5. Loss of citizen's trust in State and business ecosystem.
6. Loss of Sovereignty due to external interference.

A data protection framework based on principles of informed consent, data minimalism, data localization, holistic coverage, regulatory oversight and penalty for fiduciary as recommended by BN Srikshna Committee is the need of the hour.

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3. In comparison to conventional warfare, the possibility of successful deterrence against cyber warfare is both limited and complicated. Discuss. Also, elaborate upon India's preparedness in this regard. **(150 words) 10**

पारंपरिक युद्ध की तुलना में, साइबर युद्ध के विरुद्ध सफल भयादोहन (निवारण) की संभावना सीमित और जटिल दोनों है। चर्चा कीजिए। साथ ही, इस संबंध में भारत की तैयारियों का सविस्तार वर्णन कीजिए।

Deterrence in national security doctrine refers to prevention of offense by an adversary due to fear of disproportional damage.

It is limited and complicated in cyber warfare vis-a-vis conventional warfare as –

1. Source of attack can be hidden using proxies
2. Can be carried out from any part of the world.
3. Proving offence by a nation is difficult which makes building

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international diplomatic consensus challenging

(4) Slow sabotage (eg - Stuxnet by Israel-USA against Iranian reactors) or espionage (eg - Chinese attacks on Lockheed Martin mainframe) may be detected very late.

Indias Preparedness

(1) Cyber Security Policy 2013 containing policy guidelines.

(2) CERT-In for first response

(3) National Critical Information Infrastructure Protection Centre (NCIIPC) under NTRO

(4) Government initiatives such as Cyber Swacchta Kendra, Surakshit Bharat, for Chief Info Security officers of departments.

(5) NCCC as nodal agency for surveillance of metadata.

However, more focus is needed for indigenization of technology, enhanced awareness, standards, etc

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Given India's complex security challenges, UAVs have the potential to aid the Indian armed forces on multiple fronts. Explain. **(150 words) 10**

भारत की जटिल सुरक्षा चुनौतियों को देखते हुए, UAVs में कई मोर्चों पर भारतीय सशस्त्र बलों की सहायता करने की क्षमता है। व्याख्या कीजिए।

Unmanned Aerial Vehicles can act as a critical force multiplier for the Indian armed forces in the following ways -

① Reconnaissance and Surveillance such as by Rustom-2 developed by DRDO over bordering territories or insurgency hit areas.

② Targeted strikes such as by reaper drones proposed to be purchased from USA thus preventing scope of pilot casualty.

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(3) Air dominance by Airborne Adva Early Warning and Control system drones for enhancing efficiency of Indian air force

(4) Enhancing border security and management to prevent infiltration

(5) Territorial surveillance for identifying physiographic conditions for troop movement.

Given the various benefits, the Indian armed forces are enhancing usage of ~~of~~ UAV both by purchase and domestic production.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. Although open borders facilitate cultural continuity & greater interaction, their security implications cannot be undermined. Discuss the statement in context of India's open border policy with Nepal & Bhutan. **(150 words) 10**

यद्यपि खुली सीमाएं सांस्कृतिक निरंतरता एवं उत्कृष्ट अंतःक्रिया की सुविधा प्रदान करती हैं, लेकिन इनके सुरक्षा निहितार्थों को कम करके नहीं आँका जा सकता है। नेपाल और भूटान के साथ भारत की खुली सीमा नीति के संदर्भ में इस कथन की चर्चा कीजिए।

India has an open border policy with Nepal and Bhutan allowing for free movement of people between the nations.

Benefits

1. Enhanced people to people contacts via trade, business, marriages.
2. Increased potential for tourism
3. Diffusion of cultural practices in border regions such as Terai belt in India and Nepal.

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(4) Better Cooperation among bordering villages for mutual benefit.

Security Concerns

(1) Routing of terrorists by third countries such as Pakistan via Nepal route.

(2) Fake Indian Currency Notes smuggled into India via open border with Nepal

(3) Exit route for Insurgents and terrorists

(4) Concern over forced migration incase of instability as happened during Madhesi agitation against Nepal's promulgation of constitution in 2015.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

6. What is the role played by Central Armed Police Forces (CAPF) in border management? Also, elaborating on the problems of infrastructural deficiencies and poor personnel management faced by CAPF, suggest remedies to tackle these issues. **(150 words) 10**

सीमा प्रबंधन में केन्द्रीय सशस्त्र पुलिस बल (CAPFs) कौन-सी भूमिका का निर्वहन करते हैं? साथ ही, CAPFs द्वारा सामना की जा रही अवसंरचना संबंधी कमियों और ख़राब कार्मिक प्रबंधन की समस्याओं का सविस्तार वर्णन करते हुए, इन मुद्दों से निपटने के उपाय सुझाइए।

~~While law and order & police is a state subject, CAPF under Ministry of Home Affairs play~~

CAPF play a very important role in guarding India's borders

S.No.	CAPF	Border
1.	BSF Border Security Force	India-Pakistan India-Bangladesh
2.	Sashastra Seema Bal	Indo-Nepal
3.	Indo-Tibetan Border Police	India-China
4.	Assam Rifles	Indo-Myanmar

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Roles

1. Prevent infiltration of terrorists & illegal migration
2. Prevent narco-smuggling, human and wildlife trafficking
3. security for Border Roads development
4. Intelligence networking in border areas

Challenges

1. Poor infrastructure facilities for housing, food, etc
2. lack of state of the art equipment
3. Less career prospects vis-a-vis armed forces of India leading to frustration and low morale
4. Extended duties without break leading to psychological stress.

Solutions

1. Better pay and promotion
2. Investment in infrastructure and equipment
3. Sanctioning of leaves
4. Better grievance redressal system

Don't write anything this margin (इस भाग में कुछ ना लिखें)

7. Analyse the impact that the instability in the wider South Asian region has on India's internal security. What steps can be taken to minimise such impact? **(150 words) 10**

विस्तृत दक्षिण एशियाई क्षेत्र में अस्थिरता का भारत की आंतरिक सुरक्षा पर पड़ने वाले प्रभावों का विश्लेषण कीजिए। ऐसे प्रभावों के अल्पीकरण हेतु क्या कदम उठाए जा सकते हैं?

Since time immemorial, South Asia has acted as a system from security perspective with instability in one part affecting the other.

Impact of Instability on Indian Security

① Influx of refugees (eg- over 10 million from Bangladesh in 1971 due to repression of East Pakistan by West Pakistan)

② Haven for anti-India terrorist activities (eg- Mujahideen during Soviet invasion 1979-89 turned to Kashmir after the war)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Scope of foreign power interference (eg- Maldivian governments reliance on China leading to concerns over Indian maritime security)

(4) Domestic political repercussions (eg- unrest in Tamil Nadu due to persecution of Tamilians in Sri Lanka in 1980s and thereafter)

(5) Lawlessness in bordering areas leading to trafficking (eg- Indo-Myanmar border source of opium in Nagaland and Manipur)

Steps Suggested

(1) Promotion of democratic values
(2) Enhanced border control and management
(3) Regional connectivity and prosperity
(4) Revival of structures such as SAARC
(5) Sub-regional grouping eg- BBIN, SASEC

Don't write anything this margin (इस भाग में कुछ ना लिखें)

8. Deployment of central armed forces in states has been a contentious issue. Mention the issues involved and suggest some remedial measures.

(150 words) 10

राज्यों में केंद्रीय सशस्त्र बलों की तैनाती एक विवादास्पद मुद्दा रहा है। इसमें सम्मिलित मुद्दों का उल्लेख कीजिए और कुछ सुधारात्मक उपायों का सुझाव दीजिए।

Law and Order and Police is a state Subject in Indian Constitution.

However, in certain circumstances, the Centre can deploy CAPF such as CRPF in states. ~~to e~~

Need for Deployment

① Poor security situation due to insurgency (eg- LWE belt in Eastern India) where law and order cannot be maintained by state alone

② Explosive situations such as riots, communal attacks, etc where reinforcements are needed (eg- Babri Masjid demolition 1992)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) To counter state sponsored terrorist activities eg. in ~~To~~ Kashmir valley requiring enhanced capacity.

(4) ~~Thrust~~ ~~Con~~

Concerns

(1) State's rights to enforce law and order violated as they may be deployed by centre ~~ove~~ against state's wishes

(2) Local forces of state have better domain awareness, intelligence networks

(3) Political repercussions as it may denote state's lack of capacity to maintain law and order.

Remedial Measures

(1) Deployment only on request except if evidence of internal subversion by state.

(2) Better coordination and joint planning

(3) Primacy to state leadership in operations.

(4) Enhanced capacity building of State police.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

9. In what ways does the physiography of India pose a challenge to its counter-terrorism efforts? What can be done to deal with these challenges? **(150 words) 10**

भारत की भूआकृति किस प्रकार इसके आतंकवाद विरोधी प्रयासों के समक्ष एक चुनौती प्रस्तुत करती है? इन चुनौतियों से निपटने के लिए क्या किया जा सकता है?

Indian physiography presents various challenges in preventing terrorism such as –

(1) 15000km of land border with mountains, dense jungles, rivers, deserts and marshes making infiltration by enemy nation easy.
For example - melting of snow in spring opens up mountain passes along LoC.

(2) 7500km of coastal region leading to infiltration by sea. eg- 26/11 terrorists used sea route to enter India

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(3) Dense jungles in Red Belt enables maoists to carry out attacks and hide

(4) Cross border links among people along Eastern border enabling illegal movement of arms, Fake Indian Currency Notes via Malda route, etc.

Remedial Measures

(1) Integrated Border Management using fencing and technology

(2) Border area development and connectivity with all weather roads

(3) Generating goodwill among people in border villages via outreach programmes

(4) Enhancing development ~~and~~ in LWE areas

(5) Integrated Coastal Security Scheme

(6) Coordinated intelligence networking

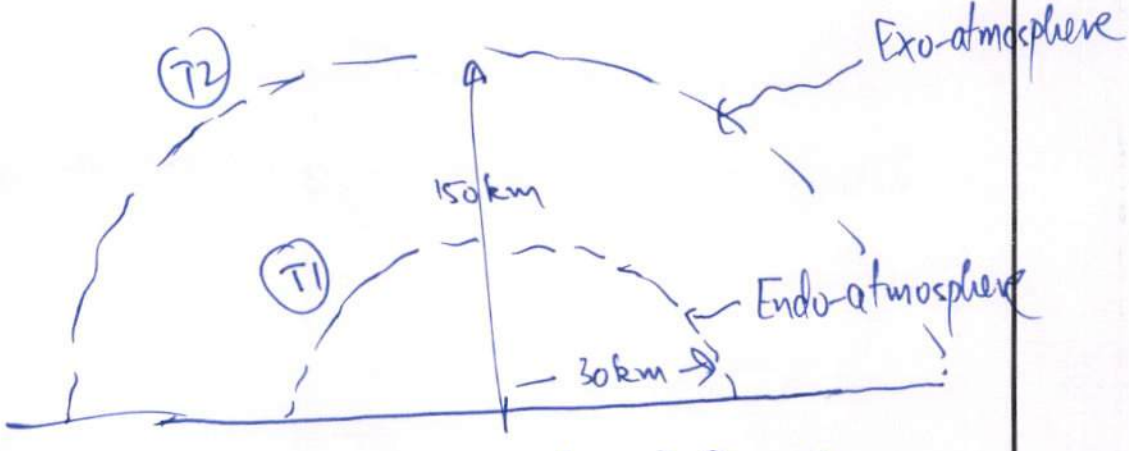
Don't write anything this margin (इस भाग में कुछ ना लिखें)

10. What are the components of India's Ballistic Missile Defence System? Also, discuss how a Ballistic Missile Defence System enhances India's strategic options. **(150 words) 10**

भारत की बैलिस्टिक मिसाइल डिफेंस सिस्टम के घटक कौन-से हैं? साथ ही, चर्चा कीजिए कि एक बैलिस्टिक मिसाइल डिफेंस सिस्टम किस प्रकार भारत के रणनीतिक विकल्पों को बढ़ाती है।

India is one of the few nations in the world with a functional Ballistic Missile Defence System.

Components



2 Tiered Ballistic Defence

Endo-atmosphere	Advanced Defence Vehicle
Exo-atmosphere	Pradyumana ~~Defence~~ Missile

Don't write anything this margin (इस भाग में कुछ ना लिखें)

India is negotiation purchase of S-400 Triumf missiles from Russia for defence in 400km range.

BMD enhances strategic options as –

1. Pakistan's nuclear blackmail can be countered via positioning BMD in major cities
2. Gives more time to put in force Cold Start Doctrine incase of state sponsored terror attack creating deterrence.
3. Can counter tactical nuclear missile deployment in border areas.
4. Enhanced capacity against ICBMs from great powers such as China.

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11. Giving examples, elaborate how India's approach to becoming a net security provider in the Indian Ocean Region is taking shape. What are the challenges and opportunities associated with this approach? **(250 words) 15**

उदाहरण देते हुए, सविस्तार वर्णन कीजिए कि किस प्रकार हिंद महासागर क्षेत्र में वास्तविक सुरक्षा प्रदाता (नेट सिक्यूरिटी प्रोवाइडर) बनने का भारत का दृष्टिकोण आकार ले रहा है। इस दृष्टिकोण से संबद्ध चुनौतियां एवं अवसर क्या हैं?

A net security provider can be defined as a nation which secures itself as well as provides security to other nations in a region.

India : Net Security Provider in Indian Ocean Region

① Cooperation with ASEAN Countries such as Vietnam, Indonesia and Singapore in provision of line of credit for defence purchases

② Joint military Exercises eg - SIMBEX

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(3) Trilateral Malabar exercise with Japan and USA.

(4) Installation of radar and surveillance system in Seychelles.

(5) Strategic port development eg- Chabahar in Iran,

(6) Humanitarian assistance and disaster relief cooperation

(7) Anti-piracy operations off the Gulf of Aden.

Challenges

(1) Naval capacity and indigenization is needs improvement visa vis China
- eg- building of more and larger aircraft carriers such as Liaoning-1.

(2) Project execution concerns such as in Chabahar.

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(3) Concerns over getting into entangling alliances

(4) Opportunity cost of expenditure which could have been used for development.

Opportunities

(1) Ensuring Sea lines of Communication securing India's economic lifelines of oil and trade

(2) Enhanced diplomatic leverage in port development projects

(3) Generation of goodwill in beneficiary countries

(4) Enhanced surveillance and docking capacity for blue water navy.

With diplomatic, civil and political cooperation to military, Indian can emerge as a net security provider in Indian Ocean Region.

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12. The UNODC (United Nations Office on Drugs and Crime) has pitched for the need of an integrated approach in order to address the difficulties in preventing, detecting, investigating and prosecuting Transnational Organised Crimes (TOC). Elaborating on these difficulties, discuss how an integrated approach can help in tackling TOCs. **(250 words) 15**

पार-राष्ट्रीय संगठित अपराधों (ट्रांसनेशनल ऑर्गनाइज्ड क्राइम्स: TOCs) को रोकने, पता लगाने, जाँच करने और अभियोजित करने में आने वाली कठिनाइयों से निपटने के लिए UNODC (यूनाइटेड नेशंस ऑफिस ऑन ड्रग एंड क्राइम्स) ने एक एकीकृत दृष्टिकोण की आवश्यकता पर बल दिया है। इन कठिनाइयों का सविस्तार वर्णन करते हुए, चर्चा कीजिए कि किस तरह एक एकीकृत दृष्टिकोण से TOCs से निपटने में सहायता मिल सकती है।

Transnational Organized Crimes such as International arms smuggling, wildlife trafficking, human trafficking, etc present with a unique set of challenges due to their wide expanse such as –

(1) Perpetrators may operate in country which does not have extradition treaty with their country of residence or may be uncooperative.
This makes bringing them to justice difficult.

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(2) TOC Groups may collaborate for money laundering which may pass through several shell companies across various jurisdictions.

(3) Law enforcement requests to other nations takes time for processing and depends on mutual recognition of crime.

UNODC's Integrated approach may help overcome these challenges in the following ways -

(1) Enhanced cooperation in evidence collection via letter Rogatory.

(2) Expedited ~~Extradi~~ extradition

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(3) Intelligence sharing

(4) Mutual help in capacity building
eg- cyber offences by TOC groups

(5) Enhanced deterrence value
with International Cooperation

(6) Crackdown on linkages between
TOC Groups operating in collaboration

Given these benefits, an integrated approach is necessary to tackle Transnational Organized Crime.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. With changes in technology, financial frauds are taking the shape and modalities of organized crime. Discuss the implications of such a trend and suggest a holistic approach to develop a sound fraud management system in India. **(250 words) 15**

प्रौद्योगिकी में बदलाव के साथ, वित्तीय धोखाधड़ियाँ संगठित अपराध के आकार एवं तौर-तरीके ग्रहण कर रही हैं। ऐसी प्रवृत्ति के निहितार्थों की चर्चा कीजिए और भारत में एक सुदृढ़ धोखाधड़ी प्रबंधन प्रणाली विकसित करने के लिए एक समग्र दृष्टिकोण सुझाइए।

Organized crime has the following characterstic features differentiating it from regular offences —

① ~~Ne~~ Hierarchical network of command and control

② Protection by political patronage

③ Skilled personnel such as lawyers and accountants for legal protection and laundering.

With technological developments (such as SWIFT for interbank communication, digitization of bank workflows, etc)

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financial frauds such as siphoning of funds in PNB case, stealing of from Central Bank of Bangladesh, etc are taking the nature of organized crime satisfying all 3 features.

Implications

① Loss of peoples trust in financial Institutions such as banks and credit rating agencies leading to concerns over systemic stability

② Difficulty in recovery due to technical nature of frauds, investigation and prosecution across multiple jurisdictions

③ Collusive nature of crimes makes

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discovery difficult

(4) Concerns about over-regulation in response hurting genuine market participants.

Holistic Approach for Fraud Management

(1) Enhanced Capacity building of regulators in digital and cyber crimes

(2) Whistleblower and witness protection for those reporting financial crimes

(3) International cooperation among law enforcement agencies

(4) Enhanced Cooperation among agencies such as SFIO, FIU-Ind, CBIC, CBDT, DRI, RBI, SEBI, IRDA, CEIB, etc.

(5) Internal reporting and grievance redressal systems

Don't write anything this margin (इस भाग में कुछ ना लिखें)

14. Give an account of the challenges related to recruitment in, legal status and accountability of, and coordination amongst intelligence agencies that need to be addressed to handle threats to national security. **(250 words) 15**

आसूचना एजेंसियों में भर्ती, उनकी कानूनी स्थिति और जवाबदेही तथा उनके बीच समन्वय से संबंधित चुनौतियों का एक विवरण दीजिए, जिन्हें राष्ट्रीय सुरक्षा के सम्मुख खतरों से निपटने के लिए दूर किए जाने की आवश्यकता है।

Intelligence agencies form the backbone of national security of any country.

There are various intelligence agencies in India such as IB, RAW, NTRO, GSTI, DRI, CEIB, FIU-Ind, etc

Challenges ~~in Recruitment~~ faced

S.No	Challenge domain	Challenge Nature
1.	Recruitment	1. Integrity of personnel 2. Prevention of espionage agents by hostile countries 3. Aptitude in modern skills

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S.No.	Domain of challenge	Nature of challenge
2.	Legal status & accountability	1. Coverage under intelligence act 2. Power to intercept data to be given must not be misused 3. ~~a~~ unauthorized tracking must be prevented 4. Due cause before interception.
3	Coordination	1. Sharing of information which may come from various sources 2. Turf wars must be prevented 3. Joint operations must be coordinated

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

Suggested Measures

1. Enhanced scrutiny before recruitment and in service
2. Removal of deadwood and inefficient/unethical officers
3. Joint coordination forums such as Joint Intelligence Committee (JIC) ~~head~~
4. Deputation of personnel within agencies for better mutual understanding
5. Monitoring by appropriate authority to review permission given before intercepting of communication.

Holistic approach and shared vision for actionable intelligence generation is the need of the hour.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. While nuclear weapons and traditional military capability remain the options of last resort, dealing with subconventional and proxy warfare requires enhanced measures given the nature of persistent threat. Discuss

(250 words) 15

जहां परमाणु हथियार और पारंपरिक सैन्य क्षमता अंतिम उपाय का विकल्प बने हुए हैं, वहीं उप-परंपरागत और छद्म युद्ध से निपटने के लिए स्थायी खतरे की प्रकृति को देखते हुए संवर्धित उपायों की आवश्यकता है।

Subconventional warfare such as by state sponsored crossborder terror strike, cyber attacks, etc require a response other than full scale war or nuclear strike to prevent escalation.

These responses are needed because -

1. The threat may not be large enough to sanction going to war
2. International pressure against conventional war / nuclear strike
3. Excessive loss to civilian life and

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Infrastructure

(4) Casualty of personnel in war

(5) Economic losses in going to war.

Possible alternatives for enhanced response

(1) Cyber ~~off~~ attack of proportional nature to ensure deterrence while maintaining plausible deniability.

(2) Surgical strikes across border on actionable reports of terrorist camps

(3) Re-negotiation of international treaties which benefit enemy nation eg - Indus Water River treaty

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(4) Diplomatic sanctions eg- FATF greylisting of Pakistan

(5) Suspension of trade items after due diligence keeping into account balance of bilateral trade.

Unconventional challenges require unconventional responses given the persistent nature of such threats.

However, such responses must be proportional and prevent damage to civillans in adversarial country.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

16. The Government has adopted a holistic approach built around simultaneous implementation of a security agenda, developmental activities and promotion of good governance to address the Left Wing Extremism in India. Comment. **(250 words) 15**

सरकार ने भारत में वामपंथी उग्रवाद (लेफ्ट विंग एक्सट्रीमिज़्म) से निपटने के लिए सुरक्षा एजेंडे, विकास संबंधी गतिविधियों और सुशासन के प्रचार-प्रसार के समकालिक कार्यान्वयन के चारों ओर निर्मित एक समग्र दृष्टिकोण अपनाया है। टिप्पणी कीजिए।

National Policy and Action Plan 2015 for LWE has the following Components -

S. No.	Domain	Measures
1	Security agenda	1. Security Related Expenditure (SRE) for reimbursement to states ~~2. Special Central Assist~~ 2. Special Infrastructure Scheme (SIS) for fortified police stations 3. Utilization of drones for surveillance 4. Specialized training (Greyhounds) and CRPF (COBRA)

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2.	Development Activities	1. Special Central Assistance (SCA) 2. RRP-I & II for road building 3. USOF for mobile towers 4. Skill Development & Placement eg- ROSHNI by MoRD
3	Good Governance	1. Ensuring implementation of Forest Rights Act 2006 2. Mineral Development Fund ~~than~~ utilization 3. PESA 1996 : empowerment of Gram panchayats 4. Proper media outreach

Don't write anything this margin (इस भाग में कुछ ना लिखें)

After recent attacks in Sukma, government has adopted the SAMADHAN strategy.

S	- Smart Leadership
A	- Aggressive strategy
M	- Motivation & Training
A	- Actionable Intelligence
D	- Dashboard
H	- Harnessing Technology
A	- Action plan for threats.
N	- No to ~~fear~~ financing

Its adoption with greater involvement of states will help in tackling the challenge of LWE in India.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. National security challenges, which are less traditional war threats but more diffused and ambiguous, can no longer be dealt with in silos. In this context, examine the need for having a National Security Strategy and also, highlight the challenges that the government faces in spelling out such a strategy. **(250 words) 15**

राष्ट्रीय सुरक्षा चुनौतियां, जो कम परंपरागत युद्ध संबंधी खतरे हैं, लेकिन अधिक विस्तृत और अस्पष्ट हैं, उनसे अब पृथक्करण प्रक्रिया के तहत नहीं निबटा जा सकता है। इस संदर्भ में, राष्ट्रीय सुरक्षा रणनीति की आवश्यकता का परीक्षण कीजिए और साथ ही, ऐसी रणनीति के निरूपण में सरकार के सामने आ रही चुनौतियों पर प्रकाश डालिए।

Terror attack in Pathankot ~~where~~ on army base lead to deployment of forces ~~across~~ from across hundreds of kilometres when local resources were available.

In this context, National Security Strategy is needed because -

(1) Better coordination among various agencies such as Armed forces, NSG, NIA, IB, RAW, etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(2) Interconnected nature of modern security challenges eg- attack on telecom infrastructure may also bring down payment gateways and stock exchanges of India.

(3) New domains of space and cyberspace.

(4) Network between terrorism, drug trafficking, insurgency requires intelligence agencies working across security, economic intelligence, wildlife monitoring, etc.

(5) Quick response time is needed for tackling newer threats.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Challenges

1. Turf wars between agencies in distribution of responsibilities

2. Difficulty in ensuring finance and capacity building to implement the National Security Strategy

3. Regulatory and oversight mechanisms need to be evolved.

4. Different personnel conditions of service and cadre management.

5. Coordination with state governments

These challenges must be overcome to deal with security challenges of 21st Century.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

18. Highlighting the need for SMART policing in India, suggest some administrative, legislative and technological reforms in order to realize this vision. **(250 words) 15**

भारत में SMART पुलिसिंग की आवश्यकता पर प्रकाश डालते हुए, इस दृष्टि को साकार करने के लिए कुछ प्रशासनिक, विधायी और तकनीकी सुधारों का सुझाव दीजिए।

Policing force, according to 2nd ARC 2005 "Public order", must transform itself from a force to a service. This SMART Police can be achieved via

S.No.	Domain	Reforms
1	Legislative	Implement Parkash Singh case (2006) directives into Police Acts by States having 1. Separation of law enforcement from investigation 2. Police Complaint Authority 3. National Security Board 4. State Security Board 5. Fixed tenures for officers 6. Police Establishment Board 7. DGP tenure system

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2	Administrative	1. Incorporate Community policing model eg- Kerela 2. Removing unethical/ incompetent officers 3. Transparency in recruitment specially at ASI levels by states 4. Honest reporting of crime statistics
3.	Technological	1. Better capacity building in cybercrimes & e-Policing 2. State of the art riot control equipment and guns (eg- PAVA shells) 3. Evidence based policies with research by Police Bureau for Research & Development

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Thus, the vision of SMART Policing can be realized to ~~make~~ ensure reform of the wider criminal justice system.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. Discuss the reasons behind private sector playing a merely peripheral role in defence manufacturing in India. Also, explain how the Draft Defence Production Policy, 2018 seeks to augment private sector participation in defence manufacturing in India. **(250 words) 15**

भारत में रक्षा विनिर्माण के क्षेत्र में निजी क्षेत्रक द्वारा अत्यंत गौण भूमिका निभाने के पीछे उत्तरदायी कारणों की चर्चा कीजिए। साथ ही, व्याख्या कीजिए कि किस प्रकार ड्राफ्ट डिफेंस प्रोडक्शन पॉलिसी, 2018 (रक्षा उत्पादन नीति मसौदा, 2018) भारत में रक्षा विनिर्माण के क्षेत्र में निजी क्षेत्रक की भागीदारी बढ़ाना चाहती है।

Defence production in India is dominated by Public Sector due to various reasons –

(1) Preferential purchases by Defence Acquisition Council and in awarding offset contracts

(2) Unequal treatment in excise/customs and taxation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Poor communication vis-a-vis Long Term Strategic Vision

(4) FDI restrictions via automatic route

(5) Difficulty in Transfer of technology to private sector

(6) Issues faced by private MSME in growth and tendering.

(7) Concerns over blacklisting & Corruption.

Draft Defence Production Policy, 2018
:- Enhancing private participation

(1) Defence Production Corridor in Agra-Chitrakoot (U.P.) & Tamil Nadu with SPV with private sector investments

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(2) Liberalizing licensing

(3) Defence Export organization for promotion of exports

(4) Enhanced FDI from 49% → 74% via automatic route

(5) special incentives to MSME sectors

(6) Reforms in Make-II in DPP-2016.

These should help in achieving in targets by 2025 —

(1) ₹1.7 lakh crore domestic production

(2) ₹0.35 lakh crore exports

(3) Indigenization in 13 sectors in defence.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

20. Discuss the implications of insufficient allocation of funds on capacity building, modernisation & operational preparedness of the defence forces in India. Also, suggest necessary steps to maintain & augment defence capabilities in India. **(250 words) 15**

भारत में रक्षा बलों के क्षमता निर्माण, आधुनिकीकरण और सामरिक तैयारियों पर अपर्याप्त निधि आवंटन के निहितार्थों की चर्चा कीजिए। साथ ही, भारत में रक्षा क्षमताएं बनाए रखने और बढ़ाने के लिए आवश्यक कदम सुझाइए।

Fund scarcity is a major issue in defence preparedness of India.

Implications

1. Lack of basic equipment such as guns
2. Shortage / poor quality ammunition
3. Vacancy of officers at various levels
4. Inability to build capacity in new areas such as AI

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(5) Low private sector participation

(6) Low indigenous manufacturing.

Suggested Steps

(1) Non-lapsable pool of funds

(2) Implementing Shekatkar Committee recommendations

(3) Better civil-military relations

(4) Defence Planning Committee

(5) Enhanced skill training in emerging spheres.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

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GENERAL STUDIES (TEST CODE : 1063)

Name of Candidate	Apurv Chauhan		
Medium Eng./Hindi	English	Registration Number	13129
Center	02	Date	16/6/18

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
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12	15	
13	15	
14	15	
15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are TWENTY questions printed in ENGLISH & HINDI
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. All questions are compulsory.
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

75, 3rd Floor, Old Rajinder Nagar Market, Near Axis Bank, New Delhi – 110060

103, 1st Floor, B/1-2, Ansal Building, Behind UCO Bank, Dr. Mukherjee Nagar, Delhi – 110009

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Explaining the significance of RCEP, discuss various aspects of India's engagement in this initiative. **(150 words) 10**

RCEP के महत्व की व्याख्या करते हुए, इस पहल में भारत की सहभागिता के विभिन्न पहलुओं पर चर्चा कीजिए।

Regional Comprehensive Economic Partnership is a proposed Free Trade Agreement between ASEAN and India, China, Japan, South Korea, Australia and New Zealand.

Significance

① Enhance trade of goods and services in ASEAN+6 leading to enhanced efficiency and economic growth of nations

② Other ~~ongoing~~ FTA such as TPP (11) and Trans Atlantic Partnership (TTIP) of which India is not a member

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would lead to better market access. Therefore RCEP can help secure markets.

(3) Ensure India's success in flagship programmes and schemes such as Make in India, Skill India, Digital India, etc.

India's Position

(1) Ensure free, fair and liberal trade in services, its strength, including Mode 3 (presence of professionals abroad)

(2) Phased reduction of market access tariffs, specially with China, to protect domestic industry.

(3) Protection of dairy industry from Australia and New Zealand

(4) Accomodative IPR rules to protect domestic pharma industry.

An early negotiation and closure of

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2. It has been acknowledged widely that smart power is the best possible way for achieving intended foreign policy outcomes. Examine in the context of India. **(150 words) 10**

यह व्यापक रूप से स्वीकार किया गया है कि स्मार्ट पावर विदेश नीति के अपेक्षित परिणामों को प्राप्त करने का सर्वोत्तम संभव तरीका है। भारत के संदर्भ में इसका परीक्षण कीजिए।

Indian foreign policy has the following objectives

Smart Power refers to an appropriate strategy ~~of~~ strategic mix of hard and persuasive power to achieve enlightened self interest.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Indian demonstration of Smart Power.

1. Strategic autonomy and principled approach in balancing equal relationships with 3 great powers - U.S.A, China and Russia.

2. De-hyphenation of Israel and Palestine

3. Strategic engagement with countries such as Myanmar for promoting democracy and stability

4. Leading coalition of like minded countries, specially developing and LDCs, in climate change (UNFCC) and Trade (WTO) negotiations.

5. ODA & HADR in Nepal, Sri Lanka, etc.

Achieving foreign policy objectives in a balanced autonomic manner has always been part of Indian tradition in

Don't write anything this margin (इस भाग में कुछ ना लिखें)

3. On the one hand, water has the potential of bringing closer regional integration in South Asia, on the other it has remained symbolic of the trust deficit between the countries in India's neighbourhood. Analyse.

(150 words) 10

जहां एक ओर, जल में दक्षिण एशिया में क्षेत्रीय एकीकरण को और अधिक घनिष्ट बनाने की क्षमता है, वहीं दूसरी ओर यह भारत के पड़ोसी देशों के बीच विश्वास की कमी का प्रतीक रहा है। विश्लेषण कीजिए।

Increasing water stress, specially in South Asia, has lead to both possible conflict and greater positive engagement.

Trust Deficit instances

① India's efforts to fully utilitize legitimate use of Indus Water Treaty after terror strikes at Pakistan's instance lead to consternation in Islamabad and Rawalpindi.

② Difficulty in early closure of Teesta Waters Agreement with Bangladesh due to concern in West Bengal

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) China's suspension of sharing Brahmaputra river data post Doklam and intensive dam building exercises.

(4) Concern by lower riparian states due to Inter-linking of Rivers (Himalayan Component 14 links)

Avenues for Integration

(1) Harnessing hydroelectric power and irrigation potential via strategic power purchase by India from Nepal and Bhutan for their prosperity

(2) Cooperation for enhancing water use and agriculture efficiency via technical and financial cooperation in South Asia

(3) Building multimodal (including inland navigation and tourism) logistic hubs in South Asia

Water's potential for bringing together

Don't write anything this margin (इस भाग में कुछ ना लिखें)

4. Despite a strong case for a Broad-based Trade and Investment Agreement (BTIA) between India and the European Union (EU), negotiations have been stuck for long owing to multiple factors. Analyse. **(150 words) 10**

भारत और यूरोपीय संघ (EU) के बीच व्यापक आधार वाले व्यापार और निवेश समझौते (ब्रॉडबेस्ड ट्रेड एंड इन्वेस्टमेंट अग्रीमेंट: BTIA) हेतु सुदृढ़ परिस्थितियां होने के बावजूद कई कारकों के चलते वार्ता लम्बे समय से अटकी हुयी है। विश्लेषण कीजिए।

BTIA between India and EU is extremely beneficial if negotiated on a fair and reasonable basis as –

① Will lead to enhanced growth due to a utilization of comparitive advantages of both India & EU.

② Better technology and managerial transfer and exchange benefitting both mutually via investments

③ Utilization of Indian strength in software for 4th Industrial Revolution and EU strength in innovation.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Reasons for Protracted negotiations

① Consensus among all EU members is difficult to achieve as often ~~mem~~ a member state may feel its interests are threatened leading to less negotiating space on EU's part as a whole.

② Concern in India over sovereignty issues due to right of foreign companies to take India to international arbitration without exhausting domestic remedies.

③ EU instability after Brexit and rise of Eurosceptic parties.

④ Indian ~~ne~~ strength in skilled professional export in services may be resisted by increasing ~~ag~~ concerns over migration in EU.

An early closure on fair basis is to mutual benefit of both parties.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

5. Non-alignment, though much debated, has retained its significance over the years in India's foreign policy engagements. Comment.

(150 words) 10

गुट-निरपेक्षता ने काफी विवादित होने के बावजूद भारत की विदेश नीति संबंधी विषयों में वर्षों से अपना महत्व बनाए रखा है। टिप्पणी कीजिए।

India was among the 5 leading nations to bring Non-Aligument Movement in Belgrade (1961) to achieve the following objectives –

① Promote peace by not engaging in permanent Cold War military blocks but taking a principled stance on each issue

② Preventing neo-colonialism and promoting decolonization

③ Ending apartheid regime and its practise

④ Disarmament and De-nuclearization for ensuring resources are directed at growth.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Its significance declined in 1980s due to Latin American sovereign debt crisis and after 1991 collapse of USSR, the cold war ended.

However, it has again ~~re~~ continued relevance in the following domains—

① Protecting interests of developing countries, the largest block in UN, in Climate Change and World Trade negotiations.

② Promoting South-South cooperation eg- IBSA (India-Brazil-South Africa)

③ Reducing armed conflict specially in Sub-saharan Africa

④ Ensuring fairness in reform of UNSC, IMF and World Bank to reflect contemporary reality.

NAM's mandate has reformed with

Don't write anything this margin (इस भाग में कुछ ना लिखें)

6. India–Nepal Treaty of Peace and Friendship, 1950 forms the bedrock of the India-Nepal relations. However, considering recent changes in the region, revising the treaty would be a prudent step. Analyse. **(150 words) 10**

भारत-नेपाल शांति एवं मैत्री संधि, 1950 भारत-नेपाल संबंधों की आधारशिला निर्मित करती है। यद्यपि, इस क्षेत्र में हाल में हुए परिवर्तनों पर विचार करते हुए, इस संधि में संशोधन करना एक विवेकपूर्ण कदम होगा। विश्लेषण कीजिए।

India - Nepal Treaty of Peace and Friendship, 1950 formed the basis of stable and robust relations on the following principles —

① Nepal's acceptance of Indian concerns over purchase of arms and military relations with foreign powers by it would not occur without consultation with India.

② Open Borders

③ Transit agreement for land-locked Nepal (via Kolkata port route)

Nepal has insisted on re-negotiation of the treaty due to -

Don't write anything this margin (इस भाग में कुछ ना लिखें)

① Concerns over its sovereignty in foreign affairs, specially its policy of balancing India and China.

② Connectivity via rail, road, air and oil pipelines ~~via~~ through northern route by Chinese assistance

③ Protection of Nepal's domestic industry and commerce.

Keeping in mind Nepal's strategic concerns and its domestic political transition after New Constitution and Madhesi agitation, it may be prudent to revise the treaty on an equal basis.

However, keeping in mind India's continued ~~role~~ role and irreplaceable role in Nepals security and development, Core Indian

concerns must be respected by

Don't write anything this margin (इस भाग में कुछ ना लिखें)

7. Accession to the Ashgabat agreement is valuable for connecting India to its extended neighbourhood. What is the Ashgabat Agreement? Assess its significance for India. **(150 words) 10**

अश्गाबात समझौते में शामिल होना वस्तुतः भारत के लिए अपने विस्तारित पड़ोस से जुड़ने की दृष्टि से मूल्यवान है। अश्गाबात समझौता क्या है? भारत के लिए इसके महत्व का मूल्यांकन कीजिए।

Ashgabat Agreement is a regional connectivity initiative for connecting central Asia with the Persian Gulf.

Member Nations

1. Iran 2. Turkmenistan 3. Uzbekistan
4. Kazakhstan 4. Oman 5. India
6. Pakistan

Significance for India

(1) Creation of Pakistan lead to India loosing access to Afghanistan and 5 central Asian countries with which it had historical trade and cultural contact

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(2) Convergence with major initiatives such as Chabahar (Iran - Afghanistan) ~~route to ta~~ INSTC (Mumbai - Bandar Abbas - Moscow - St Petersberg)

(3) Access to energy ~~nuclear~~ (oil, gas, uranium) and metallic & non metallic ores in the region.

(4) Promote regional prosperity leading to peace and security via development.

Ashgabat agreement is in consonance with India's "Think West" policy

- ensuring its energy security, enhanced trade and strategic access.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

8. The peace initiative of the Afghan government has raised some difficulties for India, nonetheless India's engagement with Afghanistan is strong enough to withstand such difficulties. Discuss. **(150 words) 10**

अफगान सरकार की शांति पहल ने भारत के लिए कुछ कठिनाइयां उत्पन्न की हैं, इसके बावजूद भी अफगानिस्तान के साथ भारत की भागीदारी इस प्रकार की कठिनाइयों का सामना करने हेतु पर्याप्त रूप से सशक्त है। चर्चा कीजिए।

Continuous war between the civilian government and the Taliban after 2001 has lead to tremendous fatigue with loss of lives and property.

This, together with rise of other militant groups such as ISIS in Nangarhar province has made matters more complex.

After official end of ISAF forces in 2014, shifting to Operation Resolute support to train and advise the ANSF, Taliban has made tremendous revival in Afghanistan.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Due to these 3 factors, the Unity Government, with its internal conflict between President Ghani and CEO Abdullah, has attempted a peace ~~trea~~ negotiation and ceasefire with Taliban.

Indian Concerns

1. Accomodation of Taliban in ~~inter~~ domestic politics will lead to greater Pakistani influence
2. Support to terrorist ~~ne~~ organizations such as Haqqani network and space to Kashmiri mujahideen based in Pakistan

Indian position of "Afghan led - Afghan Owned" peace process on fair ~~elec~~ and free elections is in India's best interest. Indian goodwill with building of Afghan Parliament, Dams, Railway and Road lines ~~has~~ will be reflected in such an outcome.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

9. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a natural choice for India to fulfill key foreign policy priorities. In this context, discuss the issues behind hitherto slow progress and the reasons for reinvigorated optimism regarding BIMSTEC.
(150 words) 10

बहु-क्षेत्रीय तकनीकी एवं आर्थिक सहयोग के लिए बंगाल की खाड़ी पहल (BIMSTEC), भारत के लिए अपनी विदेश नीति संबंधी प्रमुख प्राथमिकताओं की पूर्ति हेतु एक स्वाभाविक चयन है। इस संदर्भ में, अब तक हुई धीमी प्रगति के पीछे निहित मुद्दों और BIMSTEC के संबंध में पुनर्जीवित होते आशावाद की चर्चा कीजिए।

BIMSTEC is a crucial regional grouping for promoting enhanced connectivity, culture and commerce with ~~along~~ Bay of Bengal as the fulcrum.

Member Countries

1. Sri Lanka, 2. India 3. Bangladesh 4. Bhutan 5. Nepal 6. Myanmar & 7. Thailand.

However, it has made limited progress in the past because –

1. Concerns over Indian dominance in the grouping

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. Irregular high level meetings
3. Focus on bilateralism among BIMSTEC members and via other regional groupings such as ASEAN, etc.
4. Lack of maritime approach for prosperity

Reasons for Re-invigorated optimism

1. SAARC in limbo due to Pakistan's export of terrorism in India, Afghanistan and Bangladesh
2. Enhanced appreciation of water based multimodal transport in ensuring trade and prosperity
3. India's assuaging of concerns of other members
4. Renewed political vigour in Act East Policy.

BIMSTEC must be focussed for achieving

Don't write anything this margin (इस भाग में कुछ ना लिखें)

10. Highlighting its mandate, discuss the significance of International Solar Alliance in positioning India to a key global leadership role.

(150 words) 10

अंतर्राष्ट्रीय सौर गठबंधन के अधिदेश पर प्रकाश डालते हुए, भारत को एक प्रमुख वैश्विक नेतृत्वकर्ता की भूमिका में स्थान दिलाने में इसके महत्व पर चर्चा कीजिए।

International Solar Alliance, launched was jointly by India and France at Paris Summit 2015. It is headquartered at Gurgaon, India.

Mandate

1. Bring together developing countries between Tropic of Cancer and Capricorn to harness rich solar potential for energy transition
2. Promote R&D and technology transfer
3. Ensure finance ~~and~~ ~~this~~ for faster solar adoption
4. Equitable spreading of risks in solar finance.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Significance in Positioning India Globally

① Demonstrate its commitment to SDG Goals on Clean Energy and Climate Change

② Promote South-South Cooperation with assistance from other nations.

③ Help achieve its goals of @ 33-35% ~~reduced~~ reduced energy emission and 40% non fossil fuel energy as part of UNFCC Nationally Determined Contribution

④ Help achieve target of 100GW solar by 2022.

Indian leadership based on principled and mutual benefit is best demonstrated by ISA.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

11. India's engagement with its extended neighbourhood in West Asia has evolved into a 'Look West' approach in recent times. However, multiple faultlines in this volatile region require a balancing act on the part of India. Discuss. **(250 words) 15**

पश्चिम एशिया में अपने विस्तारित पड़ोस के साथ भारत की सहभागिता हाल के दिनों में 'लुक वेस्ट' दृष्टिकोण के रूप में विकसित हुई है। हालांकि, इस अस्थिर क्षेत्र में उपस्थित कई फॉल्टलाइन्स भारत की ओर से एक संतुलनकारी कार्यवाही की मांग करते हैं। चर्चा कीजिए।

Indian engagement with its Western Asian region must successfully maneuver between various faultlines such as —

(1) Shia - Sunni divide between Iran - Saudi Arabia respectively

(2) Israel - Palestine conflict on status

(3) Ethnic conflicts such as between Kurds, Iraq, Turkey, Syria.

(4) Israel - Iran conflict, specially via Iranian proxies such as Lebanese Hezbollah

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(5) Intra GCC Conflict between Qatar and Saudi Arabia ~~UAE~~

India has strategic convergences with nearly all the nations and hence cannot afford to antagonize or prefer any over the other. eg-
(A) oil from Iran, Saudi, Iraq (B) Diaspora in GCC etc.
Thus it has followed a balanced and prudent policy such as—

(1) De-hyphenation of Israel and Palestine for robust engagement with both

(2) Non-interference ~~or~~ in Shia-Sunni divide

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Common collaboration of an anti-terror cooperation such as with UAE, Israel, etc.

(4) Principled and fair approach in ~~dealing~~ accordance with international law. eg - Indian vote against American embassy in Jerusalem inspite of strong Indo-Israel defence, agriculture, water, intelligence and space cooperation.

This approach has been recognized ~~as~~ by West Asian countries and has been appreciated. This has lead to India maintaining good relations between adversaries ensuring its interests.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

12. While India and Russia have enjoyed good relations since the Soviet era, relying on the past may not be enough to deal with shift in the relationship in light of the rapidly evolving geopolitical realities. Comment.

(250 words) 15

यद्यपि सोवियत युग से ही भारत और रूस के संबंध मधुर रहे हैं, तथापि अतीत पर निर्भरता तेज़ी से विकसित होती भू-राजनीतिक वास्तविकताओं के प्रकाश में, संबंधों में आये बदलाव से निपटने हेतु पर्याप्त नहीं भी हो सकती हैं। टिप्पणी कीजिए।

Indian engagement with Russia has continued from the special relationship enjoyed during the Cold War.

Indo-Russian Close Cooperation

(1) Russia largest defence partner of India eg- Brahmos joint development, Sale of Vikramaditya (Admiral Gorshkov), Sukhoi30MKI, etc.

(2) Indian support of Russian position in Crimea and Russian support to India on Kashmir issue.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Nuclear cooperation in Koodankulam Civil Nuclear Plant (VVER).

(4) Russian investments in Indian energy sector via state firms.

However, it has undergone major changes in recent times.

Changing Dynamics

(1) Indian engagement with USA (MDP designation, LEMOA agreement, Predator drone, C-130J hercules, etc) with revived Russia-USA hostility

(2) Russian sale of 4 helicopters to Pakistan

(3) Russian accomodation of Taliban

Don't write anything this margin (इस भाग में कुछ ना लिखें)

in Afghan peace process given Indian Concerns

(4) Enhanced Sino-Russian security and energy collaboration to counter threat from US-EU.

However, the India and Russia must continue to maintain their historically robust relationship.

Enhancing bilateral trade, people to people contact and forum such as BRICS, RIC, SCO, informal summits, etc may may be the best path forward.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. India-China ties, marked by a broad convergence on transnational issues, on one hand and geostrategic rivalry on the other, have profound implications not only for the two countries but also the current international system. Discuss. **(250 words) 15**

भारत-चीन संबंध, जो एक ओर अंतर्राष्ट्रीय मुद्दों पर व्यापक अभिसरण और दूसरी तरफ भू-रणनीतिक प्रतिद्वंद्विता द्वारा चिन्हित होते हैं, इनका न केवल इन दोनों देशों के लिए बल्कि वर्तमान अंतर्राष्ट्रीय प्रणाली के लिए भी गंभीर निहितार्थ हैं। चर्चा कीजिए।

Indo-China ties are a paradox with great convergence on transnational issues and geostrategic rivalry on the other hand.

Transnational Convergence

1. Ensuring fair representation to developing countries in International financial institutions such as IMF and World Bank leading to NDB, AIIB, CRA.
2. Fair and reasonable transfer of technology and finance in

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Climate adaptation and mitigation.

3. Open and just multilateralism in World Trade against increasing protectionism

4. International cooperation against terrorism, extremism and separatism (eg- in SCO)

5. Preventing international tax avoidance via Base Erosion and Profit Shifting.

6. Ensuring global financial stability and trade in currencies apart from US dollar.

7. ~~of~~ Oil Buyers Club against Asian Premium.

8. Afghan stability

Strategic Rivalry

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Indian effort to ensure free and open South China Sea according to UNCLOS against chinese position
2. Beijing - Islamabad coopration against India via CPEC, China's "technical hold" on Masood Azhar in UN 1267 sanctions committee, veto on NSG entry.
3. Border dispute eg - Depsang Plains, Doklam
4. Indian opposition to BRI initiative due to chinese encirclement and interference in Nepal, Sri Lanka, Maldives.

In accordance with Wuhan spirit differences must not become disputes while focusing on cooperation where ~~fcas~~ interests converge.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

14. For BRICS to remain relevant, its members must make a realistic assessment of the initiative's opportunities and inherent limitations. Discuss. (250 words) 15

BRICS की प्रासंगिकता बनाये रखने के लिए, इसके सदस्यों को इसे उपलब्ध अवसरों और अंतर्निहित सीमाओं का वास्तविक मूल्यांकन करना चाहिए। चर्चा कीजिए।

BRICS emerged as a concept given by Jim O'Neil of Goldman Sachs to refer to emerging economic powerhouses by the middle of 21st century.

BRICS : Inherent Opportunities

(1) Development Finance via New Development Bank on the basis of equality of all members

(2) Stability of foreign reserves via Contingency Reserve Arrangement of $100 billion

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) BRICS rating agency for assessment of securities in a fair, impartial and transparent manner

(4) Cooperation in Education, Skill Development, etc.

(5) Trade and investment, including fund raising, in local currencies rather than US dollar.

BRICS : Inherent Limitations

(1) Economic weakness and contraction in Brazil and Russia after internal instability and sanctions respectively

(2) Poor democratic and civil rights records in Russia and China.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Different size and nature of economies making any efforts at FTAs difficult

(4) Strategic divergences such as between India and China, specially given robust Indo-US engagement.

Therefore, BRICS must focus on relative strengths ~~shift~~ while managing internal divergences to achieve strategic objectives.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

15. Sluggish progress of the Doha round signals that the WTO is proving to be ineffective in promoting free trade. Identifying the factors behind this, comment on the relevance of WTO in present context. **(250 words) 15**

दोहा दौर की धीमी प्रगति संकेत करती है कि WTO, मुक्त व्यापार को प्रोत्साहित करने में अप्रभावी सिद्ध हो रहा है। इसके पीछे उत्तरदायी कारकों की पहचान करते हुए, वर्तमान संदर्भ में WTO की प्रासंगिकता पर टिप्पणी कीजिए।

The Doha Development Agenda has been under threat with developed nations refusing to unambiguous endorsement at WTO ministerial at Buenos Aires.

Reasons

① Efforts by developed nations to bring in "New Issues" such as environment and labour standards, IPR strengthening global supply chains.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

These might act as excuses to restrict exports from developing countries such as India.

(2) Refusal to find permanent solution to concerns such as public stockholding of food, special safeguards for agriculture while developed countries provide excessive "green box" subsidies.

(3) Global rise of protectionism led by America under a new presidency with "America First" policy

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(4) Emergence of large number of regional trade agreements
eg- TPP, TTIP, RCEP, etc.

However, WTO continues to be relevant for various reasons such as-

(1) Forum for dispute resolution among members on trade issues

(2) Multilateralism leading to better outcomes than piecemeal efforts
eg- Trade facilitation agreement being wide in nature and comprehensive

(3) Developing countries can bargain better in multilateral fora rather than on bilateral basis.

WTO needs renewed vigour to promote trade for global prosperity.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

16. The India-France Strategic Partnership launched in 1998 seems to have finally come of age. Comment. (250 words) 15

1998 में आरंभ भारत-फ्रांस रणनीतिक साझेदारी, अंततः परिपक्व होती प्रतीत हो रही है। टिप्पणी कीजिए।

India-France Strategic Partnership of 1998 was based on the following 3 pillars –

1. Defence Cooperation
2. Space Cooperation
3. Nuclear Cooperation

Achievements

1. Strategic purchase such as Rafale MMRCA, Scorpene diesel attack submarines, etc.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

2. French ~~effort~~ support in setting up Sriharekota, liquid propulsion, payload setting continues with OCEANSAT, Arienne launch ~~etc~~ and Antrix, etc.

3. Cooperation on Jaitapur nuclear power plant by EDF ~~&~~ and NPCIL

France remained on of the few countries to publically support India after Pokhran tests in 1998.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Today, the collaboration has expanded to other areas such as solar energy via International Solar Alliance, Climate Change, etc.

France supports Indian entry to NSG and UNSC permanent member.

Strong cooperation ~~of~~ on anti-terror and cyber efforts are also robust,

Greater bilateral trade, investment, people to people contact and Business collaboration can further strengthen ~~our~~ Indo-French relations.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

17. Despite the great strides made, India-ASEAN relations have not measured up to expectations. Critically examine in the context of recent commemoration of relations by the two sides through the Delhi Declaration. **(250 words) 15**

उत्कृष्ट प्रगति के बावजूद, भारत-ASEAN संबंध अपेक्षाओं पर खरे नहीं उतरे हैं। दिल्ली घोषणापत्र के माध्यम से दोनों पक्षों द्वारा हाल ही में मनाये गए संबंधों के स्मरणोत्सव के संदर्भ में आलोचनात्मक परीक्षण कीजिए।

India-ASEAN relations have made great progress as seen by ASEAN heads attending the Republic Day celebration as chief guests and encapsulated by Delhi Declaration

(Progress Made)

① India-ASEAN FTA with bilateral trade at $70 billion.

② Security cooperation with various ASEAN countries such as Vietnam, Indonesia and Singapore.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(3) Cooperation on anti-terrorism effort and promoting peace and security.

(4) Stronger cultural connect on the basis of shared history

(5) Enhanced Connectivity eg- IMT Highway, air connectivity,

(6) Joint patrolling of critical SLOCS such as Malacca with ASEAN member Countries such as Indonesia.

Issues and Setbacks

(1) Indian trade miniscule compared to ASEAN-China trade at $400billion

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(2) Balance of trade not in favour of India with access to service sector professionals limited

(3) Delay in RCEP negotiations

(4) Indian project delivery eg- IMT Highway delayed due to various reasons.

(5) ASEAN split on seeing India as a net security provider with some taking pro-Chinese positions on South China Sea dispute.

ASEAN remains the fulcrum of Act East policy and is essential for prosperity of India in general and north east in particular.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

18. India's expanding interests rather than endorsement by others should be the basis of its engagement with what is being termed as the Indo-Pacific. Analyse. (250 words) 15

हिंद-प्रशांत क्षेत्र में भारत की संलग्नता अन्य देशों को समर्थन के स्थान पर भारत के विस्तृत होते हितों पर आधारित होनी चाहिए। विश्लेषण कीजिए।

Indo-Pacific has emerged as an integrated strategic concept stretching from Eastern Coast of Africa to Western Coast of America. ~~as an~~

India plays a pivotal role in this region.

India's position is determined by national interests which are of an expanding nature in this region such as—

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Combating piracy across Gulf of Aden
2. Securing SLOCs via choke points such as Malacca, Makassar straits.
3. Securing appropriate docking, logistics and surveillance stations eg- with Seychelles
4. Promote trade, commerce, culture via connectivity.
5. Utilize potential of Blue Economy eg- fishing, Polymetallic nodules, oil and gas, gas hydrates.

There are several flashpoints within this region which though

Don't write anything this margin (इस भाग में कुछ ना लिखें)

Important to India, are not of direct concern such as—

(1)	South China Sea dispute
(2)	Senkaku/Diaoyu Island dispute
(3)	

India should ensure that it does not engage as a participant in proxy wars and aggression between China-USA, China-Japan, etc.

At the same time, it must uphold its strategic interests and international law according to UNCLOS ensuring free passage along sea lines of communication.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

19. In what ways has the engagement between India and its diaspora evolved over the years? What role can the Indian diaspora play in furthering and shaping India's foreign policy goals? **(250 words) 15**

भारत और इसके डायस्पोरा के बीच सहभागिता बीते वर्षों के दौरान किस तरह विकसित हुई हैं? भारत की विदेशी नीति के लक्ष्यों को आगे बढ़ाने और आकार देने में भारतीय डायस्पोरा क्या भूमिका निभा सकते हैं?

India has ~~one~~ the largest diaspora in the world spread across various regions of the world at 22 million (~11 million OCI, ~11 million NRI)

Evolution of Diaspora Policy

(1) Immediately after Independence India refrained from engaging with its diaspora. Nehru promoted loyalty of diaspora

Don't write anything this margin (इस भाग में कुछ ना लिखें)

to their places of residence as there was concern over possible repercussion and backlash.

(2) During 1970s, a large number of Indian emigrated to the Gulf during the oil Boom. Protection of their interests in a volatile region became part of Indian policy

(3) Increasing migration and connect to OECD countries such as Canada and America after liberalization in 1991 ensured a rich and prosperous influential diaspora. Ministry of Overseas Indian Affairs was established.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(4) In recent times, the value of diaspora has been recognized with engagements such as Pravasi Bharatiya Divas, active address by Indian head of government, ~~etc~~. ~~proxy voting~~ to NRI, etc.

Role of Diaspora.

(1) Lobby Indian interest eg- American-Indians in favour of Indo-US Nuclear Deal 2005.

(2) Remittances eg- Kerela and Punjab

(3) Export of Culture eg- Tamil Movies in Japan ~~Russia~~, Bollywood in Jordan

(4) Trade and Investments by businessmen of Indian origin. ~~eg- Laxmi Mittal~~

(5) Development Assistance eg- Clean Ganga Fund, Swacch Bharat Kosh.

Diaspora is a core leverage of

Don't write anything this margin (इस भाग में कुछ ना लिखें)

20. India-Bangladesh relations have been termed one of fraternal friendship. What have been the key achievements in this context in the last few years? Also, identify steps to further consolidate these relations. **(250 words) 15**

भारत-बांग्लादेश संबंधों को भ्रातृत्व पूर्ण मित्रता में से एक कहा जाता है। बीते कुछ वर्षों में इस संदर्भ में प्रमुख उपलब्धियां क्या रही हैं? साथ ही, इन संबंधों को आगे और सुदृढ़ बनाने हेतु कुछ उपायों की पहचान कीजिए।

India-Bangladesh relationship have emerged as strong and robust ever since Indian help in liberation of East Pakistan in 1971.

Key Achievements

1. Land Boundary Agreement for exchange of enclaves
2. BBIN Motor Vehicle Agreement
3. Indian export to power in Bangladesh

Don't write anything this margin (इस भाग में कुछ ना लिखें)

(4) Indo-Russian collaboration in Rooppur Civil Nuclear Power plant

(5) Bangladesh's right of access to India to ensure chicken's neck challenge is overcome.

(6) Resolution of EEZ dispute by successful arbitration

(7) Bangladesh's assistance in anti-terror effort under Awami League government of Sheikh Hasina.

Further Consolidation : Domains

(1) Early resolution to Teesta Water Sharing Agreement

(2) Peaceful conduct of free and fair elections in Bangladesh supported

Don't write anything this margin (इस भाग में कुछ ना लिखें)

by India

(3) Greater Collaboration on Climate change given Bangladesh's low elevation, ~~and~~ & cyclone threat, etc.

(4) Balance in bilateral trade (currently in Indian favour resented by certain elements in Bangladesh)

(5) Greater defence cooperation

(6) Implementation of Assam Accord requiring Indo-Bangladesh repatriation agreement.

(7) greater people to people and business to business contact.

(8) Effective Border Management.

Indo-Bangladesh relations are set to

emerge as the most transformative in

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GENERAL STUDIES (TEST CODE : 1064)

Name of Candidate	Apurv Chauhan		
Medium Eng./Hindi	English	Registration Number	13129
Center	02	Date	19/6/2018

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Q. No.	Maximum Marks	Marks Obtained
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20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
   उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are TWENTY questions printed in ENGLISH & HINDI
   इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. All questions are compulsory.
   सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
   प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other that the authorized one.
   प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
6. Word limit in questions, if specified, should be adhered to.
   प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
   उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

75, 3rd Floor, Old Rajinder Nagar Market, Near Axis Bank, New Delhi – 110060

103, 1st Floor, B/1-2, Ansal Building, Behind UCO Bank, Dr. Mukherjee Nagar, Delhi – 110009

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Don't write anything this margin (इस भाग में कुछ ना लिखें)

1. Highlight the characteristics and applications of Cyber Physical systems. Also, enumerate the various objectives of the Cyber Physical Systems programme recently launched by the government. **(150 words) 10**
साइबर भौतिक प्रणालियों (साइबर फिजिकल सिस्टम) की विशेषताओं और अनुप्रयोगों पर प्रकाश डालिए। साथ ही, हाल ही में सरकार द्वारा आरंभ किए गए साइबर भौतिक प्रणाली कार्यक्रम के विभिन्न उद्देश्यों को सूचीबद्ध कीजिए।

Cyber physical systems refer to system where data from the physical world is captured via sensors, transformed digitally by processing and the output generated is used to achieve goals in a more efficient way.

For example - Smart Air conditions detecting presence of user close to home via GPS and automatically switching on to keep ambient temperature when the user reaches home.

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Characteristics

1. Usage of data capturing devices such as temperature, pressure, position, velocity sensors
2. Internet based communication protocols
3. Processing and output for 'intelligent action'

Applications

1. Industrial production (eg- robotics in automobile assembly line)
2. Pollution control (eg- Ganga pollution monitoring, air pollution alerts)
3. Home appliances
4. Defence and aerospace
5. Medical applications (eg- pacemakers, digiceuticals)
6. Agriculture (eg- 'smart irrigation')

Objectives of Cyber Physical Systems Programme

1. Indigenous promotion of R&D
2. ~~St~~ Creation of skilled personnel
3. Common protocols for communication
4. Safety of systems.

CPS are the bedrock of 4th Industrial Revolution.

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2. Explaining the rationale behind Geographical Indication (GI) protection, highlight the issues in harnessing the potential commercial benefits of GI in India. **(150 words) 10**

भौगोलिक संकेतक (GI) के संरक्षण के पीछे अंतर्निहित तर्कों की व्याख्या करते हुए, भारत में GI के संभावित वाणिज्यिक लाभों के दोहन से संबंधित मुद्दों और चिंताओं पर प्रकाश डालिए।

Geographical Indication protection as provided under the legal framework of GI Good Act 1999 has the following rationale -

(1) Ensure that natural, agricultural or manufactured products having special characterstics ~~of~~ in a particular region leading to superior quality are recognized

(2) Collective licensing of producers association leading to better incomes

(3) Protect and promote cultural

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heritage - For eg - Pochampally Ikat (Telangana), Gobindabhog rice (West Bengal), Nagpur orange (Maharashtra) Tirupati laddu (A.P.).

Issues in Harnessing potential

1. Counterfeit production by false labelling by competitors eg- Fake darjeeling Tea.
2. Quality control of GI Goods
3. Lack of awareness
4. Disputes over GI tag between states. Eg- Basmati rice controversy, Rosagulla between Odisha and West Bengal
5. Lax enforcement and penalties for misuse.

GI tags offer a unique Intellectual Property protection system for the benefit of both producers and consumers.

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3. What do you understand by Free Space Optical Communication (FSOC) Technology? Critically explain its potential in connecting rural and remote areas in India.

(150 words) 10

फ्री स्पेस ऑप्टिकल कम्युनिकेशन (FSOC) प्रौद्योगिकी से आप क्या समझते हैं? भारत में ग्रामीण और दूरस्थ क्षेत्रों को जोड़ने में इसकी क्षमताओं की आलोचनात्मक व्याख्या कीजिए।

Free Space Optical Communication is a method of data transfer and internet connectivity without an optical fibre through free space developed by X Labs of Alphabet.

It is being deployed for connecting rural and remote areas in Andhra Pradesh.

Benefits

1. Low cost in connecting remote areas where fibre connection might be prohibitively expensive.

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2. High speed connectivity
3. Immune to magnetic disturbances

Technological issues

1. Weather attenuation and interference
2. Difficulty in product maintainence incase alignment receiver and transmitter is damaged, preventing data transfer,

FSOC has tremenduos potential in ensuring the overarching objective of "Digital India" — Knowledge based society for prosperity of all.

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4. What are Orphan Drugs? Examine the significance of putting in place a policy framework for such drugs in a developing country such as India.
(150 words) 10

ऑर्फन ड्रग्स क्या हैं? भारत जैसे एक विकासशील देश में ऐसी दवाओं हेतु एक नीतिगत ढांचा स्थापित करने के महत्व का परीक्षण कीजिए।

Orphan drugs refer to those pharmaceutical developments which treat rare diseases because of which the economic returns on development and production is extremely low or non-existent.

Low population and/or paying capacity dents possible realizable revenue leading to their neglect.

This has a very severe consequence on those affected by such diseases which may be life threatening / lead to life long disability.

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Significance of Policy Framework

1. Ensure right to health for all
2. Promote economic returns to incentivize R&D and production of pharma companies
3. Their development may lead to new discoveries having positive spillovers
4. Better understanding of pharmacokinetics, genomics, etc in the process

Such a policy to prevent market failure is in keeping with the objective of the welfare state enshrined Constitutionally in India.

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5. Highlight the factors that give advantage in attracting talent to a particular country. In this context, what steps should the government take to turn "brain drain" into "brain gain" in India? **(150 words) 10**

उन कारकों पर प्रकाश डालिए जो किसी विशेष देश को प्रतिभा को आकर्षित करने में बढ़त प्रदान करते हैं। इस संदर्भ में, भारत में "ब्रेन ड्रेन" (प्रतिभा पलायन) को "ब्रेन गेन" (प्रतिभा लाभ) में परिवर्तित करने के लिए सरकार को क्या कदम उठाने चाहिए।

Attracting global talent is a key objective in a knowledge based society.

Factors incentivizing talent attraction

1. Adequate funding for projects and research
2. Sufficient remuneration
3. Robust research ecosystem of mentors, labs, technology, etc.
4. Protection of intellectual property so developed
5. Industry - academia linkages
6. Promotion of enterprenurship.

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Steps taken by Government

1. VAJRA scheme
2. INSPIRE Faculty scheme
3. Ramanujan ~~Scholarship~~ Fellowship
4. Ramalingaswamy Fellowship in biotechnology

5. Suggested Measures & Way Forward

1. Strengthening CSIR labs
2. Incentivize private R&D (low in India vis-a-vis International benchmarks)
3. Regulating publishing journals for quality and ethical conduct
4. Strengthen IPR Policy 2016 & its implementation
5. Promote women, specially in STEM via schemes.
6. World Class Universities.

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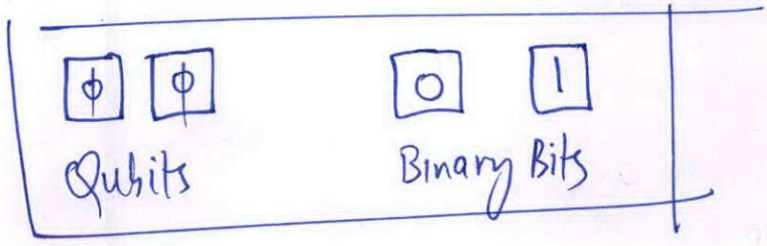
6. What are quantum computers? Discuss their potential in solving problems that are too complex for today's classical computers. **(150 words) 10**
क्वांटम कंप्यूटर क्या हैं? उन समस्याओं को हल करने में इनकी क्षमता पर चर्चा कीजिए जो वर्तमान के क्लासिकल कंप्यूटरों के लिए अत्यधिक जटिल हैं।

Quantum computers are devices which store and process information in qubits using the principle of superposition of 0 and 1 instead of binary digits used by regular computers.

Thus, ~~they~~ the state of information in quantum computers is probabistic ~~and~~ rather than deterministic



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Potential

1. Prime factorization time will reduce tremendously leading to breakthrough in decryption having major impact on digital security
2. Defence purposes eg- Lockheed Martin planes using Quantum computer mainframes
3. Complex climate change modelling and prediction
4. Faster processing of certain categories of codes

Quantum Computing is an emerging field with various implications for the future of Computing in the 21st Century.

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7. Discuss the obstacles in women's access to science education in India and also suggest remedial measures to overcome these obstacles.
(150 words) 10

भारत में विज्ञान की शिक्षा तक महिलाओं की पहुंच के मार्ग में आने वाली बाधाओं पर चर्चा कीजिए और इन बाधाओं को दूर करने के लिए उपचारात्मक उपाय भी सुझाइए।

Low Women participation in Science education is due to various factors which impedes growth of science as well as harms women.

|Obstacles|

1. Social factors - stereotypes about ~~ka~~ women taking up non science streams in class 11th and 12th.

2. Difficulties in workplace eg- breaks due to maternity stalls career progression making it difficult for re-integration

3. Patriarchy in science research ecosystem.

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4. Unequal pay and promotion for women in science vis-a-vis their male counterparts

5. Gender gap in higher education system affecting science in particular.

Suggested Remedial Measures

1. Schemes such as KIRAN by DST, Ministry of Science for promoting women researchers
2. Gender perspective in school textbooks to promote science
3. Promotion of Women Scientists via media and communication to celebrate their achievements Eg- Marie Curie
4. Preventing patriarchy at workplace via strict enforcement of laws

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8. With the help of examples from various fields discuss the achievements and limitations of India's performance in indigenisation and development of new technology. Also, comment on the significance of MSME sector in achieving indigenisation of technology. **(150 words) 10**

विभिन्न क्षेत्रों के उदाहरणों की सहायता से, नई प्रौद्योगिकी के स्वदेशीकरण एवं विकास में भारत के प्रदर्शन संबंधी उपलब्धियों और सीमाओं पर चर्चा कीजिए। साथ ही, प्रौद्योगिकी के स्वदेशीकरण को प्राप्त करने में MSME क्षेत्रक के महत्व पर टिप्पणी कीजिए।

India has had a long history of innovation in new technology in various spheres.

Achievements in various Fields

1. Pharmaceuticals - Bharat Biotec developing JENVAC, ROTAVIRUS and Typhoid vaccine,
2. ~~Indigenous~~ Space - ISRO's Indigenous cryogenic upper stage engine.
3. Agriculture - ICARs Pusa Arhar, Delhi University's GM Mustard.
4. Healthcare - Sohum device for newborn

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deafness detection

Limitations

1. Major defence systems still not indigenized eg- aircraft thruster in HAL Tejas.
2. Low global outreach and commercialization
3. Less original breakthroughs in certain fields such as biologics with focus on biosimilars in India such as by BIOCON.

Significance of MSMEs in Indigenization

1. Promote grassroot innovation
2. Commercial return to innovators via enterpreneurship eg- Bellatrix airospace.
3. Potential to grow into large global firms
4. Helping in production via ancillarization.

Greater funding and robust IP protection with ease of Doing business may help further in Indigenization.

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9. India needs to collaborate and participate in international scientific projects in order to place itself as a major player in cutting edge research. Discuss in the light of ongoing global mega science projects. **(150 words) 10**
कटिंग एज रिसर्च में स्वयं को एक प्रमुख प्रतिभागी के रूप में स्थापित करने हेतु भारत को अंतर्राष्ट्रीय वैज्ञानिक परियोजनाओं (इंटरनेशनल साइंटिफिक प्रोजेक्ट्स) में सहयोग करने और भाग लेने की आवश्यकता है। वर्तमान में वैश्विक स्तर पर जारी मेगा साइंस प्रोजेक्ट्स के आलोक में चर्चा कीजिए।

Modern science is often a collective ~~endeavo~~ endeavour, spanning across institutions and researchers across continents.

Ongoing Global Mega Science Projects and Role of India

1. Large Hadron Collidor at CERN for particle physics – India ~~a~~ member; contribution in detectors
2. International Thermal Fusion Project for fusion energy – Indian skilled personnel in research

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providing valuable inputs

3. LIGO project for gravitational waves detection - One of the 3 ~~st~~ centres to be built in India

4. Copernicus Programme of ESA with Indian satellites enriching earth observation while benefiting from European sentinel satellites

5. Indian participation in developing regulatory framework in International Telecommunication Union for development of 5G standards in telecommunication

Mega science projects ~~will~~ both benefit small researcher driven efforts ~~and~~ and are in turn benefitted from them. Both must together promote the goal of science for development.

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10. What is Mitochondrial Replacement Therapy? Discuss its potential in reducing genetic disorders. Also, list various issues around its use in fertility medicine. **(150 words) 10**

माइटोकॉन्ड्रियल रिप्लेसमेंट थेरेपी क्या है? आनुवांशिक विकारों को कम करने में इसकी क्षमता पर चर्चा कीजिए। साथ ही, फर्टिलिटी मेडिसिन (प्रजनन चिकित्सा) में इसके उपयोग से जुड़े विभिन्न मुद्दों को सूचीबद्ध कीजिए।

Mitochondrial Replacement Therapy or 'Three Parent Babies' refers to ~~use of~~ transplantation of mitochondrial DNA from a woman to replace a deficient one with nuclear DNA being contributed only by the father and the mother.

Since m-DNA is passed down only from the mother, its defect can lead to various disorders.

Mitochondria helps in cellular Adenosine Triphosphate (ATP) production

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the unit of energy exchange in cellular biology.

Issues with MRT

1. Unintended consequences and gene pool contamination
2. Religious concerns
3. Ethical concerns over designer babies and disability removal via scientific eugenics.
4. Low empirical baseline data about long term efficacy of the technology.

These concerns must be debated in a robust and objective manner to help those who may suffer from genetic diseases.

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11. The rapid diffusion of Artificial Intelligence begets unique opportunities and challenges for India. Discuss. What can be done to address these challenges? **(250 words) 15**

आर्टिफिशियल इंटेलिजेंस (कृत्रिम बुद्धिमत्ता) का तीव्र प्रसार, भारत के लिए विशिष्ट अवसर और चुनौतियां उत्पन्न करता है। चर्चा कीजिए। इन चुनौतियों का समाधान करने के लिए क्या किया जा सकता है?

Artificial Intelligence refers to any system sufficiently advanced in decision making so as to mimic human intelligence in achieving desirable outcomes.

For example - IBM's Dr. Watson computer in prescription of most appropriate treatment course in certain oncology cases.

Opportunities for India

1. Enhance productivity of labour

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in agriculture, manufacturing and services

2. Redeployment of personnel from repetetive tasks to innovative roles

3. Growth of economy in general and certain sectors such as ICT, Robotics, etc in particular given strong Indian software skills.

4. Enhance national security eg- CCTV facial recognition

5. Improved governance eg- ~~Another~~ crime hotspots identification

6. Inclusiveness eg- disability friendly website access

Challenges

1. Low skill levels may lead to

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unemployment given low achievement outcomes in education. For eg- WB Report suggests 69% jobs in India under threat of AI.

2. Increasing inequality in society
3. Threats from countries making advances in AI eg- Cyber warfare using AI by China
4. Digital divide may increase

Way Forward

According to Kamakoti Committee following measures may be used -

1. Data protection, exchange and integration centre
2. N-AIM Mission worth ₹1200 crore over 5 years
3. Centres of Excellence & Test Beds
4. AI Grand Challenges
5. Skilled Personnel creation

6. Tax incentives
7. Common standards.

AI is the future engine of global growth for India.

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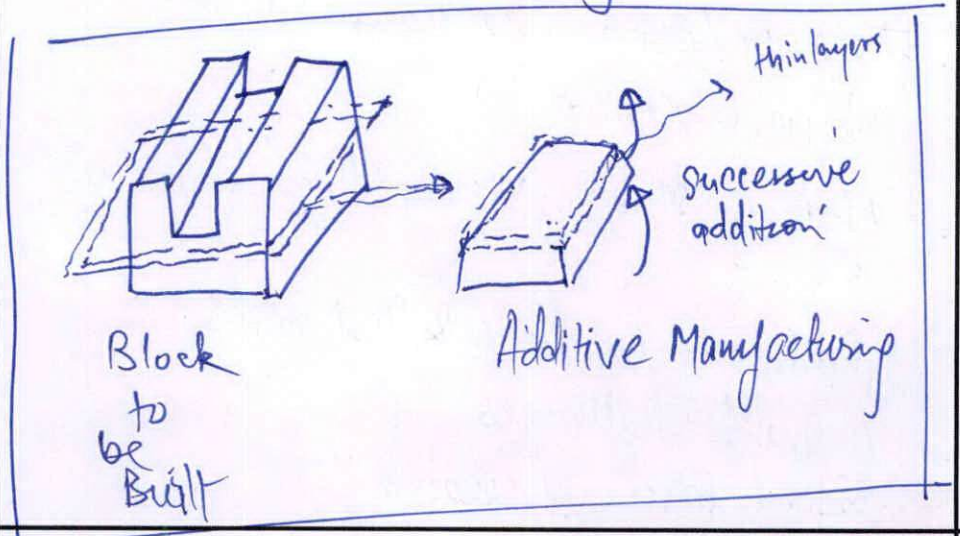
12. Briefly explain the concept of Additive Manufacturing as well as its advantages and challenges in comparison with conventional manufacturing methods. Also, comment on its potential in terms of revolutionising organ replacement in humans. **(250 words) 15**

ऐडिटिव मैन्युफैक्चरिंग (योजक विनिर्माण) की अवधारणा की संक्षेप में व्याख्या कीजिए, साथ ही परंपरागत विनिर्माण विधियों की तुलना में इसके लाभों और चुनौतियों को भी बताइए। साथ ही, मनुष्यों में अंग प्रतिस्थापन में क्रान्तिकारी परिवर्तन लाने के संदर्भ में इसकी क्षमता पर टिप्पणी कीजिए।

Additive Manufacturing or 3-D printing refers to a production process where extremely thin layers of cross-section are layed successively on top to build final product.

Traditional manufacturing uses either removal or moulding.



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Advantages

1. High customizability
2. Precision manufacturing
3. Diversified material ink to produce biological systems (eg- BIOINK)
4. Small production equipment (3D printer)

Challenges

1. Cost per unit is high
2. High mass production time
3. Unethical use risk increases eg- 3D Printing of guns
4. Skillset in modelling is scarce

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Organ Replacement Potential

Using Bioink tissues and organs can be grown leading to following benefits –

① Original stem cell from receipient makes rejection and auto-immune attack risk low

② Scarcity of donors and quality of organs is tacked effectively

③ Unethical practises in organ donation overcome

④ Better outcomes eg skin grafting of same texture and colour

Additive Manufacturing promises to be a potential revolution cutting across various spheres.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

13. What is the Human Genome Project–write (HGP-write) and how is it different from the earlier Human Genome Project (HGP)? In this context, also critically explain the potential benefits of the HGP projects for healthcare activities in India. **(250 words) 15**

ह्यूमन जीनोम प्रोजेक्ट-राईट (HGP-write) (मानव जीनोम परियोजना-राईट) क्या है और यह पूर्ववर्ती ह्यूमन जीनोम प्रोजेक्ट (HGP) से किस प्रकार भिन्न है? इस संदर्भ में, भारत में स्वास्थ्य देखभाल गतिविधियों के लिए HGP के संभावित लाभों की आलोचनात्मक व्याख्या भी कीजिए।

Human Genome Project-write is an initiative to ~~an~~ build from scratch an entire ~~g~~ human DNA base pair code consisting of 3 billion base pairs (A-T-C-G) and 20,000 genes.

Unlike HGP which was only meant to decode existing code (Read) HGP-Write will involve building on over leading to better understanding of human genomics.

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Potential Benefits for India

1. Understand mechanism of various diseases, specially genetically transferred such as haemophilia affecting India's tribal population.

2. Develop ~~drugs~~ individualized drugs and delivery systems for precision medicine.

3. Better outcomes in possible gene editing such as using CRISPR-Cas9 in the future for treatment

4. Spillover effects in understanding gene-protein translation mechanism

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which is utilized in other domains as well (such as agro-biotech).

5. Identify common vulnerabilities in South Asian population vis-a-vis other regions for targeted public health policies. eg- explain why Indians suffer more from Cardiovascular Diseases even after taking into account lifestyle and nutritional control factors.

Human Genomics research will help tremendously in achieving the goals of National Health Policy 2017 to ensure health for all.

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14. Comment upon the need for encouraging participation of private players in the space sector in India. Can it be argued that furthering India's achievements in the space sector requires a comprehensive space law? **(250 words) 15**

भारत में अंतरिक्ष क्षेत्रक में निजी प्रतिभागियों की भागीदारी को प्रोत्साहित करने की आवश्यकता पर टिप्पणी कीजिए। क्या यह तर्क दिया जा सकता है कि अंतरिक्ष क्षेत्रक में भारत की उपलब्धियों को आगे बढ़ाने के लिए एक व्यापक अंतरिक्ष कानून की आवश्यकता है?

Private sector participation in space is crucial for a more robust and broad based Indian space programme.

Need for Private Participation

① Develop new technologies under private initiative. eg- American firm SpaceX developing landing re-usable rocket Falcon series.

② Enable ISRO to focus on core research while outsourcing

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repetitive production to private players.

(3) Build a more proficient ecosystem of space researchers under private employment which may be tapped by the public sector

(4) Promote growth and employment via space industry

(5) Space being a global market can help in augmenting forex reserves and global soft power using private sector.

Need for Space Activities Bill, 2017

Currently only 2 regulations - Remote Sensing Data Rules and Satellite Communication rules provide framework

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for regulation which is insufficient.
The proposed law has the following-

1. Licensing for space companies
2. Registration of all space based objects
3. Regulations on space standards (eg- to prevent space pollution such as Kessler ~~Sy~~ Effect)
4. Penalty of ~~₹5 crore~~ 3 year jail or ₹1 crore or both for violation.

Thus, the bill may help in growth of space via private participation in keeping with the principles of UN Committee on Peaceful uses of outer space.

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15. Water shortage in India has been sought to be addressed through various policy and technological interventions. Explain. Also, examine the benefits of desalination technology and the costs associated with it. **(250 words) 15**
भारत में विभिन्न नीतिगत और तकनीकी उपायों के माध्यम से जल की कमी की समस्या का समाधान करने के प्रयास किए जाते रहे हैं। व्याख्या कीजिए। साथ ही, विलवणीकरण प्रौद्योगिकी के लाभों एवं इससे संबद्ध लागतों का परीक्षण कीजिए।

A recent report by NITI Ayog suggested that nearly 600 million Indians are under severe to extreme water stress and over 2 lakh die annually due to lack of access to safe and sufficient water.

This requires both policy & technological interventions

Technological Interventions

① Micro and drip irrigation

② Desalination

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③ Water efficient technology such as CO_2 Brayton cycle in water intensive thermal power plants ~~[illegible]~~

④ Cloud seeding via AgCl and salting

Policy Interventions

① Water Regulatory Framework Bill

② Amendment to Easement Act for regulating groundwater use

③ National Water Policy priority use

④ Promoting Water User Association

⑤ True cost pricing of water

⑥ Polluter pays principle for polluting Industry

⑦ STP/ETP cluster approach under schemes such as Namami Ganga

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Desalination refers to water extraction for human purposes from sea water having excessive salts.

Benefits

1. Inexhaustible resource (97% water in oceans)
2. Serves coastal populations where most of human settlement by population resides
3. Counters water diversion from other areas preventing water conflicts

Costs

1. ~~Expen~~ Expensive technology
2. Damage to ocean ecology
3. Remote and inland area supply still a concern

Indian collaboration with Israel may help India in addressing water stress.

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16. Originally devised as a distributed ledger technology for Bitcoin, Blockchain offers a wide range of applications across sectors, especially banking and finance. Discuss. (250 words) 15

मूलतः बिटकॉइन के लिए एक डिस्ट्रीब्यूटेड लेजर टेक्नोलॉजी के रूप में प्रकल्पित (इज़ाद), ब्लॉकचेन विविध क्षेत्रकों, विशेष रूप से बैंकिंग और वित्त में विभिन्न प्रकार के अनुप्रयोग प्रस्तुत करती है। चर्चा कीजिए।

Blockchain refers to distributed ledger authenticated and verified by users via solving mathematical problems and their chronological placement in a sequence ("chain").

Bitcoins which ~~was~~ is the first and most popular cryptocurrency was its first wide application, the ledger being net coins in a wallet as assets with transfers leading to counterpart debit and credit.

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However, the technology ~~has~~ is increasingly being adopted in other spheres such as -

1. Online transfer of cross border payment in international trade such as recently used by ICICI Bank
2. Stock Exchanges eliminating need of Single clearing system
3. Sovereign currency eg. Petro by Venezuela backed by oil
4. Blockchain voting and verification
5. Blockchain contracts enforcement
6. Land and Asset Registry systems

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based on blockchain

~~The~~ While private cryptocurrencies have proven to be controversial the underlying technology has great potential in varides spheres and is increasingly being adopted.

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17. What do you understand by TRIPS plus provisions being advocated by developed countries outside the WTO based TRIPS agreement? Do you think India should show some flexibility and incorporate certain TRIPS plus provisions in its IPR regime? **(250 words) 15**

विकसित देशों द्वारा WTO आधारित ट्रिप्स (TRIPS) समझौते से बाहर अनुशंसित किए जा रहे ट्रिप्स-प्लस प्रावधानों से आप क्या समझते हैं? क्या आपके विचार से भारत को कुछ लचीलापन दिखाना चाहिए एवं अपनी IPR व्यवस्था में कुछ ट्रिप्स-प्लस प्रावधानों का समावेश करना चाहिए?

TRIPS Plus provisions refer to one of the "New Agendas" being promoted by developed countries in international trade negotiations.

Provisions

1. Protection of clinical trial data to prevent its access for development of generics

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and biosimilars

(2) Extended Patents beyond the 20 year period to incorporate the time spent in patent examination and granting of patent.

India has concerns over these as

(1) Clinical trials data is essential for domestic pharmaceutical industry based on generics & biosimilars

(2) Extended patents are against public health goals in a developing country like India.

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However, certain ~~the~~ TRIPs plus provisions regarding extension may be adopted as long as public health goals are not compromised.

It may also help in promoting domestic investment in Research acting as a greater incentive for indigenization and higher value addition.

Better enforcement of IPR Policy 2016 must form the bedrock of actions in international trade negotiations in ~~the~~ the realm of Intellectual property.

Don't write anything this margin (इस भाग में कुछ ना लिखें)

18. What do you understand by Digital therapeutics? Discuss the opportunities & challenges of Digital Therapeutics specifically in context of preventing lifestyle diseases in India. **(250 words) 15**

डिजिटल थेराप्यूटिक्स (चिकित्सा शास्त्र) से आप क्या समझते हैं? विशेष रूप से, भारत में जीवनशैली से संबंधित रोगों की रोकथाम के संदर्भ में डिजिटल थेराप्यूटिक्स के अवसरों एवं चुनौतियों पर चर्चा कीजिए।

Digital therapeutics or digiceuticals refer to devices and integrated systems using ICT to capture and process data to enable users to achieve desirable health goals.

They rely on the principles of Cognitive Behavioural Therapy.

For example - Fitbit watch monitoring steps taken, heart rate, etc.

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Opportunities

(1) Can help prevent obesity - the major cause of 4 NCD i.e. CVD, Diabetes, Oncology & Stroke

(2) Monitor better nutritional intake

(3) Alert doctors about stress triggers / hypertension beyond recommended range so that early action is taken

(4) Help in dealing with mental health challenges

(5) Cessation of addictive substances such as smoking, alcohol and narcotics

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Challenges

1. Such devices are expensive preventing widespread adoption
2. Efficacy of certain devices is not verified by independent third party Randomized controlled trials.
3. Awareness and adoption levels are low in India
4. Basic digiceutical ecosystem such as Health Data Security, e-health record common standards etc is lacking.

Digiceutical is a nascent industry with great scope for future progress and expansion provided challenges are overcome.

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19. The efforts to improve science and R&D in India need to go beyond questions of expenditure. Comment. **(250 words) 15**

भारत में विज्ञान तथा R&D को उन्नत बनाने के प्रयासों को व्यय के प्रश्नों से परे जाने की आवश्यकता है। टिप्पणी कीजिए।

India spends nearly 0.69% of its GDP on R&D which is low relative countries such as South Korea (4%) and America (2%)

However, science and R&D has several other bottlenecks as identified in Science Technology and Innovation Policy 2013 such as -

(1) Quality of primary, secondary and tertiary education with poor outcomes eg - ASER Report mentions 25% class III students can

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read class II text

(2) Rote learning rather than innovation and curiosity about natural systems

(3) Gender gap in science stream

(4) Missing industry academia linkages

(5) Low per capita researchers in India (~230 per million)

(6) Lack of focus on tackling grassroot challenges in most research institutions

(7) Cultural systems and values which prohibit scientific temper and rationalism

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(8) Missing science educators for explaining science to the masses.

(9) Low private participation in R&D.

Way Forward

(1) Atal Innovation Mission
- → Tinkering labs
- → Incubation Centres

(2) KIRAN scheme women in science

(3) NIDHI scheme for innovation based enterpreneurship

(4) VAJRA scheme for attracting global talent

(5) Mooes such as SWAYAM for quality reference material for students

Technology based on scientific progress is the most important factor for development of a prosperous nation.

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20. Adopting a mission mode approach for developing energy storage systems will be crucial for realizing India's electric mobility ambitions as well as achieving our renewable energy targets. Analyze. **(250 words) 15**

भारत की इलेक्ट्रिक मोबिलिटी महत्वाकांक्षाओं को साकार करने एवं साथ ही हमारे नवीकरणीय ऊर्जा लक्ष्यों को प्राप्त करने के लिए, ऊर्जा भंडारण प्रणालियों (एनर्जी स्टोरेज सिस्टम्स) का विकास करने हेतु एक मिशन मोड दृष्टिकोण को अपनाना महत्वपूर्ण होगा। विश्लेषण कीजिए।

Battery technology is emerging as the most crucial factor in 2 major industries —

① Electric Mobility

Target: All electric fleet by 2030

> Faster charging of cars
> Enhanced range
> Low lifecycle maintanance
> Stable power output

② Renewable Energy

> Store solar and wind

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production which is intermittent in nature

Target: Achieving 175GW of renewables by 2022 is crucially dependent on battery.

It also has major applications in consumer electronics such as smartphones.

Thus, a mission mode approach with fixed targets and milestones, required funding and sources as well as skilled personnel development is needed so that India may emerge as a leader in this sphere.

This

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Therefore India must ~~invest~~ invest in battery technology such as Graphene Based technology and ISRO's licensing of Li-ion for mass production by private sector participation.